

Space Details

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Home

This page last changed on Apr 10, 2017 by [linda](#).

This is the home page for the Summer Interns space in 2017.

Schedule

Refer to the Summer Intern Calendar (Zimbra Public Folders)

BBQ coordination

T-shirt coordination

Open House Assignments

Weekly updates (Please Report by noon each Thursday)

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01-August-2013

This page last changed on Apr 10, 2017 by [kgomes](#).

02-August-2012

This page last changed on Apr 10, 2017 by [kgomes](#).

I'm starting my confluence post early because I will most definitely forget it this week...

It's very frustrating when biology does things you don't expect it to, or when you finally figure out that the method you've been planning on using isn't the best way to answer your question(s). I have been working with a new culture in which the females have all suddenly become gravid and the singles floating around are all males, which is a problem since so far, I have used a more-or-less consistent ratio of males:females without eggs for my work. It might not matter now since I'm also changing my approach to better address the question of how non-target genetic material changes what signal I am getting from my copepods in culture. I sort of wish I had talked to more people at the beginning of my project, but at least things are making a little more sense now.

Have to also figure out if something funny is happening with the prongs I am using in lab. Consistency has been decreasing, which is not good.

More later.

03-August-2017

This page last changed on Jun 07, 2017 by [mage](#).

feel free to post your updates whenever you can, but by Thursday at the latest
CLICK ON THE ADD COMMENT BELOW TO ADD YOUR UPDATE

Comments

Where did the time go?

How can it be the end of WEEK 9?! I knew this day would come, but am still not prepared for the internship to be over. This week I worked on my paper and presentation, all while finalizing my sequences and deciding which trees are the best to build- BTW, they take forever! This weekend is going to be a busy one!

I can't wait to see everyone's presentations on Wednesday. It's always great to hear about what everyone did over the summer.

Now, back to work...

Posted by [mbassett](#) at Aug 03, 2017.

Hi everyone,

I don't have much to report since my data collection has been finished since last week. I have just been working on the paper and presentation which should be finished in plenty of time before the internship is over. Open House was a blast (Cubelets were probably the highlight in my opinion) and I'm looking forward to the seminar this afternoon. It finally hit me that the internship is over in a week which is a bummer, but it was an enjoyable summer and I'll try to make the most of this last week.

-David

Posted by [djumes](#) at Aug 03, 2017.

Happy Thursday! Second-to-last confluence update - yikes!

It has been a somewhat slow week work-wise, but with so many great activities! I went diving in the kelp forest exhibit at the Aquarium last Thursday. I wrote a blog post about, which I hope will be posted soon.

The open house was a lot of fun. I got talked into building my own ROV and attracted a small audience of aquarium volunteers as I was building; I think they were impressed, I did not tell them that I majored in physics... Anyway, I am very proud of my new ROV Engineering Certificate of Achievement, which is hanging in my cube.

NASA was totally cool, especially the fluid mechanics lab. There's a little part of me now that wouldn't mind being an astronaut - would that be like the opposite of diving?

I had a couple of frustrating days this week. My virtual machine ran out of hard disk space, and it took me a while to figure out how to expand it. Now that it is expanded, I am trying to load a massive database onto it and it's taking FOREVER - two days so far, and still going. I'm feeling the pressure, as I need this database in order to make the last couple of figures for my final presentation. I might have to resort to the back-up plan today.

Have a lovely weekend! Don't forget to take some time to relax. 😊

Cheers,
Rachel

Posted by [rkahn](#) at Aug 03, 2017.

Heyyy there!

This week has gone pretty smoothly. I had such a good time on the NASA tour! I am still mind blown at all the things we got to see while we were there. I finally finished pulse 66 yesterday, and have to

do one more section before I am finished with pulse 67. I hope that I have time to finish it with enough time for analysis and to put together a good presentation, but I am remaining hopeful! Worst case scenario, I will just focus on pulse 66 for the presentation. Super nervous for next week but also excited to see everyone present! Hope everyone is having a great week! It is going to be a loooooong work filled weekend for me haha.

- Danielle

Posted by [dfabian](#) at Aug 03, 2017.

Hi everyone!

Not too much to report this week. I've finished with all of my data collection and am currently extracting everything from VARs and compiling it together. Hopefully by the end of the day I can have it done so I can spend the weekend working on my paper and presentation! Other than that, I thought the Open House was super fun and had a great time working the booths and also walking around to see what everyone does -- the ROVs at the dock were super cool!!

Have a great weekend everyone!

Victoria

Posted by [vassad](#) at Aug 03, 2017.

Wow. Ok so it's getting to the point where everything is happening like RIGHT NOW.

Remember last week when I said that everything would have to go perfectly for my project to be done by the final presentation? Haha. That didn't happen. But that's science, I know.

Our first round of cloning PCR yielded zero results, so I created some more specific primers, and while I was waiting for those to come, I digested my plasmid with my restriction sites and de-phosphorylated it, ran out my product on a gel to confirm, purified and quantified the DNA. My new cloning primers worked beautifully, and after amplifying all my sequences successfully, I digested the sequence/gene DNA, purified it, and ligated it to the plasmid DNA. My first transformation and plating of gene DNA into my plasmid DNA and then the E. coli was a fluke, so today we're troubleshooting/testing a bunch of the different steps to see what went wrong. So we'll be re-plating the rest of my transformed cells onto plates today, along with re-transformed E. coli cells from yesterday's ligations, and then additionally, we're re-doing our cloning PCR, and instead of digesting it and then putting it into the plasmid, we'll be ligating it into a different, intermediate plasmid, sequencing it maybe? And then digesting it out of the plasmid to transform it into our E. coli. Apparently this method is more reliable. Keep your fingers crossed for me!

If all goes well, I'll put my grown up, re-transformed colonies into the fridge tomorrow (to stop them from growing), picking colonies on Monday, and putting them into my expression vector later in the week. My project definitely won't be done by the presentation, so I'm extra glad I'll be staying here for a while so that I can finish it. If this turns out to work, and my sequence of interest is *actually* the gene for the luciferase in vampire squid, I'll be really, really, *really* excited. GAhh.

Anyways, hope y'all are doing alright, I'm so excited to hear about everyone's projects!

Chloe

Posted by [cweinstock](#) at Aug 03, 2017.

Week 9 (or 7 in my case).

I started working in the pCO₂ in air project, which was cool as I had to learn how to clean data for matlab to read it. It was a lot of figuring things out but I got some pretty cool atmospheric CO₂ curves that I will be comparing to the measurements from our moorings. However, I was informed early this week that I was presenting today to my mentor, so my focus shifted to the presentation (won't complain as it had to happen at some point). I've spent most of this week polishing figures and getting everything to fit without being overwhelmingly technical--it has definitely been a challenge!

Oh, I also went diving with George last Friday at the kelp forest array. It took us a while to find the array but once we did we managed to do most of the work George had planned. It was good to go out on a work dive and be out in the field again! Also NASA was epic, I really enjoyed the tour and I'm thankful that we were able to go. It's crazy to think all these things happened in the last week--busy days!

On to finishing this presentation... at least I don't have to worry about the full paper just yet 😊.

Diego

Posted by [dsancho](#) at Aug 03, 2017.

Wow, we have like 3 days after today. May all our original project goals rest in peace while we scramble to finish up what we can (;

I'm nearly finished, having completed all the content for Kelly-Benoit Bird's web page and the two brief news articles about her. Nancy is reviewing them now for grammar/style, and then Kelly will take one last look to make sure everything is correct. I'm now finishing up the remaining ESP pages that need to be written. About half have already been sent to Nancy and Jim for review, and I'm finishing up the last half now. I'm NEARLY done, and am hoping to have ALL of the ESP content written before I leave today and ready for review.

Paper and presentation are firmly weekend projects, but I'm not too worried yet about that! I've picked the layout and made the cover slide (which is what always takes me the longest ha) and have a good idea of how I want my presentation to go. Hopefully it will just be a lot of copying and pasting screenshots of different webpages. Sometime this weekend if I have time (and need a break from the paper) I'll finish up some blog things, but otherwise that can wait while the rest of my the project is racing to be finished.

Too long, didn't read: "AAAAH!!! (But everything is going to be okay)

P.S. The open house was wonderful and NASA blew my mind!

Posted by [ebuieren](#) at Aug 03, 2017.

Aloha! Is anyone else as tired as I am? All this thinking. Well I am still finishing up little nit picky details to my projects. I need to stop being picky and move on to working on the presentation and paper stuff which are in very basic draft form. I guess I feel anxious about things and am starting to feel like oh geeze, what if my project sucks and I just dont know it. I am hopeful I will finish my list of edits and all my work will live up to my expectations. I am excited for next week and continuing to collaborate with my mentor after the intern program ends. Doing the paperwork now!

Mahalo
Alia

Posted by [athompson](#) at Aug 03, 2017.

It has really been busy these past few days. It's really exciting to see all the products of all of our time and effort. Seeing the results are really what make time fly by as we wrap up the project. Other than preparing my presentation, I'm just doing some finishing touches on the network at the moment. There needs to be more false positives in order increase the and accuracy/precision of the model. I got some great feedback from my mentors today on my presentation. A lot needs to be simplified and a lot needs to be expanded on. The REUers will be getting a tour of MBARI tomorrow so I'm excited to show them the sound system. Other than showing them my (John's) desk, that is about all I can show them on my end. We'll see what happens though.

I'm getting sad that it's coming to end soon. I have really enjoyed working here. I do look forward to presenting my work to everyone though. A few of my teachers might be able to make it to the symposium too so that is exciting.

Daniel

Posted by [ddeleon](#) at Aug 03, 2017.

Week 8 so I'm not scrambling to finish my papers quite yet 😊

The NASA tour was probably the highlight of the week for me, the Fluid Mechanics lab was my favorite part. Back at MBARI I've been spending this week getting data from the IMU and trying to determine if it could be used in the way we were hoping. The answer is starting to look like a pretty clear no. The signal I'm chasing is far too small to be picked out from the general vibration of the motor. We've known since

the start that this device would most likely not be sensitive enough. My mentor hopes to eventually try implementing this with a "tactical grade" sensor. At this point my goal with the project is to get some pretty signal plots and explain why it's not the data we're looking for.

Tired and looking forward to the long weekend.

Pierre

Posted by [pbaudin](#) at Aug 03, 2017.

Hi all!

I finally finished up my growth-light experiment on Saturday! We continued growing the cultures to make sure their growth rates didn't increase as densities increased, and they didn't (hurray!). I gave a practice talk in my lab meeting on Wednesday, so I spent much of the week preparing for that. I've also spent a fair amount of time working on writing up my paper. Daily sampling of the chemostats has continued as the CO2 and nitrate experiment is continuing.

I'm looking forward to everyone's presentations next Wednesday!

Ellie

Posted by [ehandler](#) at Aug 03, 2017.

Week 9:

I was able to take a timelapse video of the Open House using SeeStar! Within a day, I had to debug and modify the SeeStar code and get it ready for the Open House. Thom and I also had to disturb Chris Scholin and ask permission to mount the SeeStar onto his balcony. On Monday, however, we noticed that there was a hardware problem with the Go Pro, as it created a thousand folders with one image in each folder. I had to write a few scripts on Python to move and enumerate all the images in one folder, and of course compose a timelapse from the images. It was exciting as I would have been happy if the SeeStar only managed to save a few images. As of right now the SeeStar is being used to monitor the Power Plant, Rachel Carson, and Rascal the cat.

As for my project, I performed a dry run for the presentation and received some great input from my mentors; I just need to polish the presentation, practice, and get started on the paper. I have been pre-occupied documenting my work by writing README's and diagrams, which I think will help with the paper. Writing these manuals are probably one of the most important parts of the project because if they are well written then all the work can be continued, otherwise all the work is for naught. I really wish to have my work carried over, but since the project is open source, I suppose I can always ask for a pull request.

I also added the checksum function I mentioned last week.

Posted by [babadines](#) at Aug 03, 2017.

Hi all,

wow! its hard to believe how quickly the past nine weeks have passed by...week 10 here we come 😊
this has been an interesting week for me..I started out Monday confident that my data had interesting results, only to find there wasn't no strong correlation. After meeting with my mentor to discuss the situation, we decided to look at the other data set and potentially find a stronger correlation, sadly after two days (Tuesday and Wednesday) of analysis we found the data to be less significant than the previous and so we went back to the original data. As for today, I spent my morning working on a pre-presentation to deliver to my mentors later in the day. My pre-presentation went well and I received really good feedback and suggestions which I'll be working on for the remainder of the day....and weekend!

Enjoy the rest of your days 😊
Ash

Posted by [asanchez](#) at Aug 03, 2017.

The end is so close, and I still have so much to do! This week I've been working on tidying up my code for future use. Making sure all my data is saved properly and backed up. I've also been working on my presentation. At this point, I'm trying to strike a balance between giving enough background information that people can understand what I am talking about while still having enough time to talk about my actual project. I've also been working quite heavily on creating visualizations that really show what I'm doing. I think videos will play a pretty important role in my presentation. I'll link to one at the end of this post.

<https://www.youtube.com/watch?v=7mJEaN2Kz2w>

Posted by [nyee](#) at Aug 07, 2017.

03-July-2013

This page last changed on Apr 10, 2017 by [kgomes](#).

Although this has been a short week, I finally feel like things are coming together on my project. I was able to obtain the preliminary conversion rates for my holothuroids! This allows me to convert my length measurements into a mass which then can be used to estimate population biomass. I am meeting with Christine Huffard today to go into detail about extracting my data from VARS and using software to change the measurement point made in VARS to the actual sizes being seen (makes the measurements based on the known 29cm of the sizing lasers). With thousands of observations already, I have decided that I need to stop collecting data in the middle of next week. I think I am going to come in during the holiday to get a little extra data collected as well. Overall, I think my project is progressing well.

04-August-2011

This page last changed on Apr 10, 2017 by [kgomes](#).

04-August-2015

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05-July-2012

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It's Thursday.

06-August-2015

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Week 9...

06-July-2017

This page last changed on Jun 07, 2017 by [mage](#).

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Comments

Hello everyone!

I hope everyone was able to enjoy their 4th of July weekend!
I realize it's only Wednesday but I figured I'd post now since I have the time...
this intern-week was fairly short because of the holiday and as will my post:

Proposals presentations for the REU on Friday went great! I was impressed with everyone's on-going research project and how well we all did!

Right now, I'm still refining the DVM algorithm from last week. I'm hoping to have that done by the end of this week and continue working on CTD data from shipboard. Francisco Chavez stopped by earlier today to get an update on my progress and suggested some literature for me to read on carbon export by vertically migrating zooplankton. Very interesting paper if you like to learn about carbon export or plankton, email me and I'll forward you the link. I'll be meeting with my mentor tomorrow either morning or afternoon to discuss the next step in the process and talk about the SACNAS deadline that is coming up soon (July 14th). I'll be working on my abstract and scholarship application for their October

conference, I'm hoping that'll make it to Salt Lake City this fall, I'll keep you all posted 😊 that's all for now.

have a great weekend!

Ash

Posted by [asanchez](#) at Jul 05, 2017.

Week 4:

Only 2 work days this week. There is now the guts of a Coastal Profiling Float up and running on the bench in my lab. I've now been spending my time polishing the interface for the testing system and gathering data to compare results of the different methods used to calculate required pressure. This was a step away from the secondary project I started last week but I hope to have this finished and finalized in the next few days so I can spend the rest of the time focusing on the new project.

I'm enjoying seeing my system in action and looking forward to the aquarium sleepover on Saturday

Pierre

Posted by [pbaudin](#) at Jul 06, 2017.

Aloha everyone!

Short but busy week. This week I misread days and scheduled things stupidly. Currently trying not to be annoyed with myself. Finished my HABS survey draft which I will be asking all of you to share with your people on Facebook. PRETTY PLEASE. I got to speak with John Ryan about the updates to the HABS timeline for the CeNCOOS educational resource section and we have scheduled an interview time for next week. I also put together some pdfs of the top 20 pages from the CeNCOOS website for specific time periods. I am looking forward to the BBQ today and the sleepover this weekend. I hope the aquarium isn't haunted! I hope everyone has a good productive week, see you all soon.

Mahalo for reading,

Alia

Posted by [athompson](#) at Jul 06, 2017.

The summer is going by way too quickly...

Had a blast over the holiday weekend adventuring with David, Emma, and Ellie (and Beverly at the end!). We went to a vegan festival, hiked in Big Basin State Park (the oldest state park in CA, fun fact), and

swam in the creek at Pfeiffer Big Sur State Park. If you notice me having any difficulties opening doors, holding heavy things, etc., it's because I skipped one too many rocks... We ended the weekend with a grill-fest on my mentor's sailboat (10/10 recommend grilled pineapple) and a lovely firework display at the Watsonville Municipal Airport. I will happily offer my new-found vegan grilling skills for our upcoming intern BBQ. 😊

As for work, I have been a bit frustrated lately realizing how fast the program is flying by as I slowly progress in my programming endeavors... 10 weeks is not long enough - I still have so much to learn!! I am currently working on a script that will implement unsupervised machine learning. In English, that means I'm writing a program that will make my computer detect patterns in the data all by itself - like magic!

Happy Thursday!

Posted by [rkahn](#) at Jul 06, 2017.

Morning!

Hope everyone had a wonderful long weekend adventuring and celebrating and eating etc. I drove down to LA to see my closest friend's song that she wrote/sang performed by Illenium at the bougiest night club I've ever been to. It was SO COOL I feel like a proud mom. It will be officially released at the end of the summer but if anyone wants to listen to it... [Crawl Outta Love](#) it starts at 6:30 but it gets better at like 7:30(: So that was pretty incredible.

Yesterday I created some cDNA from RNA that we had from the vampire squid. The reverse transcriptase strand switching cDNA protocol is pretty complicated and it takes ~6 hours, but it was successful and now I can work on trying to express the symplectin-like protein (the luciferin) by cloning it into a vector. I'll be finishing up making and ordering my primers this afternoon. We ended yesterday by running a gel of our cDNA to see if we actually made anything, and it was really satisfying to be able to see the results of the days work. I can't believe we're already this far into the summer. I never want to leave and I feel like I'm just getting started on my project.

Oh and also I'm house sitting for someone at MBARI so I won't be in the apartments for a few days. See y'all at the bbq!

Posted by [cweinstock](#) at Jul 06, 2017.

Hey guys!

Short week but things are going better for me in terms of my project! Still haven't heard back from the fisheries person concerning whether or not I can use all the data I collected last week so I have moved on to a separate part of my project. I am going through the time series images taken at Station M and doing a count of all individuals that I find for the grenadier species that are found there over the entire time series. After I finish the counts, I plan on assessing any trends in the data and comparing the data with climate indices. Until I hear back from the fisheries person, I won't know for certain which direction my project will take. I will keep you guys posted! Hope everyone had a great 4th of July weekend!

- Danielle F.

Posted by [dfabian](#) at Jul 06, 2017.

Hello,

Hope all is well. Not a whole lot to report this week other than I've been making progress on the spectrograms that represent my sound files. I'm dedicating my day to debugging and communicating with Danelle (who is out for 2 weeks) through Git. Hopefully I can get a nice looking spectrogram by the end of the day.

I'll see you guys at the BBQ!

Daniel

Posted by [ddeleon](#) at Jul 06, 2017.

Hi Everyone!

I hope everyone had an amazing long weekend! I had an absolute blast, finished the REU proposal presentation on Friday (Ash and Daniel y'all did amazing!) and I got to take a few REUers down to LA. It was a lot of fun having an excuse for my local self to be a tourist! P.S. if any of y'all wanna take a trip down there lemme know - maybe I'll go with and y'all can have a place to crash at!

Other than that, it's been a super short week! Yesterday I spent some time trying to extract information from VARs but since my mentor Crissy isn't here it's been a little difficult, can't seem to crack the last step but I'll be going over that on Monday (thanks Linda for all your time trying to figure this out with me!). I'll be spending the rest of the day just collecting more information from VARs.

The t-shirt people have all been busy solidifying the design (thank you so much Rachel for all the graphic design work!), Danielle and I will go tomorrow to talk to the company that will be printing them and hopefully we'll have a more solid idea on that.

Have an amazing weekend and see y'all at the BBQ!

Victoria

Posted by [vassad](#) at Jul 06, 2017.

Week 5:

~~I've gotten two out of the three serials working and learned a lot about the Feather M0. I've been picking up debugging techniques with the oscilloscope and FTDI cable. I got all three serials working. What was frustrating is that the pinout-muxing from the libraries were too generic and did not necessarily match with the pinout of the board. I've been trying to search for other files, but worse comes to worst I suppose I can customize the files I have to match the board. I am apprehensive to do that because I do not want to damage the board by providing incorrect voltages.~~

~~Even if I only have two serials,~~ I think I will work on the sleep protocol soon. There are lots to learn do and learn, but I am not complaining.

Posted by [babadines](#) at Jul 06, 2017.

Hey everyone! Hope you all had an awesome long weekend. Short week this time.

About a third of the time was spent working on experimenting with interlaced video and convolutional neural networks. I used a technique known as transfer learning with Google's network known as Inception V3 on three types of images (interlaced, de-interlaced, and my "smart" de-interlaced). The results showed that convolutional neural networks have a much easier time working with de-interlaced images.

Another third was setting up some more scripts to move a lot of my data pipeline onto atlas shares (yay backups). I would have processed the data this week except the VPN didn't work out exactly as I expected. Not a huge deal as the code is the primary bottleneck for this sort of data processing and all I have to do is press run when I'm at MBARI.

The last third was spent away from coding (which I've been sucked into for about 3.5 weeks) looking at the higher level details of my project and learning more about the tools I am working with. I re-read through some of the previous intern papers to get ideas how to write mine. I re-read through the Faster RCNN paper. A paper called "Unsupervised Underwater Fish Detection Fusing Flow and Objectiveness". I also watched some videos that explain how Resnet50 works. Basic forms of object detection in images. How to incorporate multiple data sources into a neural network. Fully convolutional neural networks and how to visualize how they work. Basic understanding as to how Inception blocks work.

Nathan

Posted by [nyee](#) at Jul 06, 2017.

Whistle while I work...

I've been spending my time cleaning sequences since my last update. CO1 and H3 are a bit wonky and not completely aligning with the sequences Stephanie already had done- we're trying to figure out why

the same "species" is falling out into two groups on the phylogenetic tree... the plot keeps thickening 😊 Hopefully, the next round of sequences will shed some light on the situation- hopefully.

I've also started to compile the literature and figure out how to write a species description. In this exercise, I've learned:

Many pteropods were described by Germans, pre-1900. This has left my pool of references small, but I think I have enough to compare our new species to.

Stephanie gave me a bunch of images to use for the line drawings I'm going to do. I'm going to spend my afternoon going through them and starting sketches.

Cheers,
Megan

On a side note, if anyone needs hardwood floors refinished- come talk to me- I'm now an expert with a drum sander 😊

Posted by [mbassett](#) at Jul 06, 2017.

I have spent this shorter week writing up my work and refining figures. I also had my first meeting with my mentor (he's back!) to talk about what I've been up to and where to go from here.

By writing up my work, I noticed large differences between Año Nuevo, Hopkins and the M1 moorings and it is apparent that the closer you are to an upwelling source the greater variability you will see. There are many other things that play into it at Hopkins and M1, but it's been interesting to try to make sense out of all these signals.

The future of my project still seems uncertain. I will finish looking at the small window of the timeseries I've been working on and come up with a few conclusions that can be tested against the entire timeseries (or a larger portion of it), particularly because data from recent months seems to show greater variability.

I also met with Charlie Boch who is working on ocean acidification experiments in the lab by reproducing pH, dissolved oxygen and temperature variability observed during upwelling events. We might be working together as the Hopkins and Año datasets are shallow enough to accurately measure the effects that biological organisms see during these events. He is interested in knowing the duration of increased pH, lower temperature and lower O₂, as well as their amplitudes and rates of change. His project is trying to tie this to climate change, especially since the natural ranges of an upwelling environment are similar or greater than the global-scale changes being predicted in ocean pH on a global scale.

Biggest take away from this week: writing things up makes you remember the big picture. It's so easy to get carried away by the small details of one figure or one bug in your code and forget what it all means and what the objective is. Anyways, it was a good learning week despite being extra short.

Looking forward to the bbq, thanks George!

Diego

Posted by [dsancho](#) at Jul 06, 2017.

Hey y'all!

Right off the bat, if you have any fun Fourth of July photos, you'd like to share with the blog that would be great! Email me at ebueren@mbari.org, and it doesn't have to be a lot of information (one pic and then literally just an email of "I went to X place to do Y thing") to include. It'll be fun! Get your internet fame! Your family will love it!

Also, if you haven't done the mystery picture yet, do it! <http://www.mbari.org/animal-plant-mineral-or-man-made-2/>

Same goes for if you haven't sent me your profiles (you know who you are, we're down to the final three!) (EDIT: and then there were two...)

As for what I've been up to, this 2 day week was not as productive as I was hoping, but I did get some good research time in. I watched Jim Birch's DOEST lecture on the ESP to get a better background of info, transcribed Kelly Benoit-Bird and Larry Bird's interviews, and am now getting ready to start writing

(ha, I said that last week). Susan (social media) also posted the first mystery picture on instagram and it got like 200 likes, so that was really cool! I've also worked on getting some new intern profiles up thanks to some proof-reading from Alia (thank you!!) so be ready for those.

On a fun note, this weekend was great. Ellie, Rachel, David and I went hiking and racked up some mileage (and some sore but happy muscles for me!) plus took a bunch of great pictures. Lots of good food and cool trees, plus I think we all accidentally got new LinkedIn profile photos because the lighting was great at Big Sur.

Emma

Posted by [ebueren](#) at Jul 06, 2017.

Hi everyone!

I got back from the BBQ and realized I'd forgotten to submit my update today! I had a great weekend (after quickly checking on my algae on Saturday morning) exploring the area!

The short week has actually been quite productive. The algae have been taking longer to acclimate to the different light levels than we anticipated so we changed the structure of my experiment. I am now growing cultures under seven different light levels at the same time - it's quite a setup in the incubator. This has meant that I've been spending more time sampling and less at my desk this week which has been fun! I also made new graphs to track the progress of these new cultures, and I'm working on writing an R-script to analyze the results from the sampling measurements. One of the chemostats was acting up this week - its lid kept popping off. It was open for a while on Wednesday, and we're concerned the culture is no longer axenic. I'm going to do a bacteria test in the next couple of days to check if it has been contaminated, really hoping it's not. I'm really looking forward to the whale watch and sleeping at the aquarium this weekend. Hope everyone has a good time!

Ellie

Posted by [ehandler](#) at Jul 06, 2017.

Hi everyone,

Sorry for the delay on the Confluence. I have finished collecting Raman spectra for 0,10,20,30 and 40 degrees C with varying pressures between 0-1500psi for fresh water. From that, I was able to run the Matlab software and see the 5-Gaussian distributions on it and plug those numbers into Excel. It's a pretty tedious process to keep converting and renaming files, so I'm glad that's finished! Now I've just been making a variety of plots to see if any of these variables we are testing have a noticeable trend. It's not looking extremely clear right now, but I am going to talk to my mentor this morning to look into it more. I know that the data I collected at least fell within the expected range of activation energies (previously determined by my mentors) based on Arrhenius plots; they had fresh water activation energies between 1.5-2.9 kcal/mol and my data fell between 2.54-2.61 kcal/mol.

Other than that, the 4th of July weekend was a blast. We went hiking at two different state parks, saw fireworks in Watsonville, and had some other fun adventures. On top of that, we went whale watching this past Saturday and saw 2 BLUE WHALES. That was easily the highlight of the weekend, followed closely by an unforgettable night at the aquarium and making a copious amount of peanut butter cookies for the cookie break this afternoon.

-David

Posted by [djumes](#) at Jul 10, 2017.

07-August-2014

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07-July-2011

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Weekly updates for July 7th

07-July-2015

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08-August-2013

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-

08-June-2017

This page last changed on Jun 07, 2017 by [mage](#).

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Comments

Yesterday and today have mostly consisted of background research (reading more literature and wikipedia tangents) and grasping the bigger picture of my project. Today my mentor and I identified the main issue that I will be handling which concerns machine adaptation around geophony and anthrophony noise sources. I am just about to install Raven to begin looking at data that has been collected in the past couple years. Raven is a program that draws a spectral map of a given sound file. It also has band limited energy detection software that will help pick up all instances where blue and fin whale calls may exist (given an average frequency, bandwidth frequency and dt).

Daniel

Posted by [ddeleon](#) at Jun 07, 2017.

Dear Diary... just kidding. Haha.

I wrote my update and then the connection timed out so I lost it. This is my rewrite.

After ~5 tries, I got STOQS (the software my mentor created which I will be working on) up and running on my work laptop. Now I can start working through some examples and familiarizing myself with Python things.

I'm leaving this evening with the Haddock Lab on their cruise. Might take a brief hiatus from STOQS to work on a small programming project for Steve, and also to read his book and the Python data science handbook my mentor left for me...

That is all. Hope this wasn't too vague.

Have a great week!

Rachel

Posted by [rkahn](#) at Jun 07, 2017.

My project has been tentatively set; I will be working with the vampire squid (*Vampyroteuthis infernalis* - not actually a squid, it's a weird relict from the evolution and separation of octopods and decapods into two separate phylogenetic groups) and trying to identify the molecular sequence for its luciferase enzyme in its bioluminescence pathway. The luciferase enzyme is the enzyme that activates the luciferin compound, which is the light producing molecule. Most of these compounds will be located in the arm tips of the squid. If we are able to sequence the luciferase transcriptome, we will then make clones and test them to try and produce bioluminescent activity.

This is all still kind of up in the air - it will depend on what we get during the cruise, and if we find an abundance of something very very exciting, or if we don't find any vampire squid, or if we find a bunch of other glowing things.

Posted by [cweinstock](#) at Jun 07, 2017.

The week so far has mainly consisted of figuring out how I will go about my project. After viewing some time lapse videos and images through VARS that the tripod picked up from Station M at a depth of ~4,000 m I've decided to work on behavioral patterns of the Enteropneusta, or acorn worm. These worms are known for creating a fecal spiral or sometimes switchbacks. I will be working through images on VARS and identifying the Enteropneusta wherever they may appear, as they come and go from in the water column to the sea floor. After identifying I am measuring the worm's size, and the diameter of the spirals or switchbacks. Once all collected I will be going on to try and identify a correlation between amount of food available and whichever pattern it creates. But right now I'm mainly sifting through the years of images available to me on VARS.

Posted by [vassad](#) at Jun 08, 2017.

Dusting off the cobwebs...

I had to stretch way back to my undergrad molecular bio class (~10 YEARS... I now feel old... 😊) this week as I started my research project. One component of my summer will be helping my mentor Dr. Stephanie Bush describe a new species of Pseudothecosomata (a pteropod). Aside from describing a new species, this project may aid in reviving Pseudothecosomata, which was broken out into three families. I've already extracted the DNA (hopefully) from some samples Steph already had in the freezer and we should run PCR today to see if it worked.

I'm missing Monday's meeting- I'll be on the MBA collecting cruise. I've been out on a couple of these before and they are really fun! I believe we are looking for corals, anemones, and flapjack ocotpuses! Wish us luck!

Megan

Posted by [mbassett](#) at Jun 08, 2017.

Hi all,

this week I was introduced to the data set that I will be working with as well as some ideas as to which direction I would like my research to proceed in. I am working with a data set of backscatter, temperature/salinity, currents and surface fluorescence from a Monterey Bay mooring (M1 ADCP) taken from 1992 to 2016 and will be using the data to either look at zooplankton diel vertical migration patterns from backscatter profiles or using recorded current patterns from the mooring to observe zooplankton dispersion and retention. Another idea is to use the data set along with a model to observe particle migration from the Monterey bay coast and see how it is being affected by Ekman transport and upwelling and compare that to what is actually observed in the data from 1992-2016 backscatter profiles. I've also been getting myself familiarized with the data set using MATLAB and reading primary research on the topics on interest.

I'm going out on a cruise today with Chris Wahl to retrieve a wave glider near the Santa Cruz area and test atmospheric equipment while we're out there.

That is all for this week, have a great weekend everyone!

Ash

Posted by [asanchez](#) at Jun 08, 2017.

The week so far has consisted of me mostly getting my sea legs (ha ha) with Wordpress and installing photoshop, and a lot of reading about MBARI (annual reports, technology roadmap and the 2011 strategic plan for 2011-2020). I'm also starting a mini-quick project of editing some information sent to us by Tom O'Reilly who works on the mobile cytometer (which measures cells) and the wave glider (an autonomous vehicle that keeps the shore in contact with underwater devices). That's been really interesting, and I'm excited to eventually put it into Wordpress and design that page presentation as well. Major project is still pending, but I'm hoping to finish the O'Reilly project by the start of next week/end of Monday, so Nancy and I were going to start brainstorming that after. I'm also scheduled to go out on the Rachel Carson the 19th/20th to take pictures and I'm really excited!

Emma

Posted by [ebueren](#) at Jun 08, 2017.

Hello!

This week I've been solidifying my project and started to set up some initial testing. I'm working with a strain of eukaryotic algae from the Arctic, *Micromonas* CCMP 2099. The main part of my project will be looking at physiological changes, as shown by chlorophyll fluorescence, to the algae when they're grown under different light regimes. That experiment will take about 2.5 weeks to run, so I'm going to continue with a longer term project comparing how the algae do under different levels of nitrate and carbon dioxide. This week I began growing cultures of the algae and testing to get initial growth rates. I'm also working on learning how to use R so I can more effectively analyze the data later in the summer.

I'll be with Megan on the Rachel Carson collecting animals for MBA, so I won't be at the intern meeting on Monday.

Posted by [ehandler](#) at Jun 08, 2017.

This week in the life of an MBARI intern:

I did some important things this week like finding the maps to the different MBARI buildings, uploading a picture to my confluence profile, getting my computer setup, organizing my mailbox and calendar. I was also granted access to the CeNCOOS google analytics resources and have been analyzing some of the data to gain insight into the website user base to set goals on increasing visitors to the website and a target demographic. I met with Dr. James after the seminar yesterday and had a very wonderful and interesting conversation and I think I made a friend! Additionally I have been reading CeNCOOS strategic plan, getting familiar with the website and doing the background reading on how to use google analytics to inform educational resource design, augmented learning/augmented reality and trends/ issues in informal science outreach. My mentor set up a meeting for me next week with Mary Miller from the San Francisco Exploratorium and I am beginning to prepare for that. I think it will probably take me a few more days to finish the reading the literature to finally work out the details of my project. Overall a great first week, I am grateful for the opportunity and excited to get to work with some many amazing and talented people.

Alia (My nickname is Lili though!)

Posted by [athompson](#) at Jun 08, 2017.

Hey guys!

It has been a great week so far! I have enjoyed getting to know everyone and hearing about all of the interesting projects that will be worked on this summer. As for my own project, this week I have started to gather data related to my thesis. I first did some background reading on the relationship between groundfish with pelagic larvae in the Pacific and climate change. My thesis involves assessing how larvae and adult groundfish are potentially affected by climate change. I am attempting to focus on species that are important to fisheries. So far, I have been mining all of the Pacific hake data that I can find from various databases, including outside of MBARI. I have separately collected data for larvae, juveniles, and adults, and will be analyzing the data to see if there are any patterns occurring among the different age classes and larvae, as well as between the fish and climate indices. I am excited about my project and can't wait to see how it turns out! It is going to be a fun summer! Please don't hesitate to contact me if you need anything! 😊

Posted by [dfabian](#) at Jun 08, 2017.

Firstly, I downloaded and installed basic software onto my work environment, such as my mentors' SeeStar source code and its dependencies. I also dual-booted Ubuntu and fiddled around with the Arduino IDE.

My task has been to catch up with the SeeStar project and understand the overall picture and of course, compile, and run the code onto the hardware.

Thom introduced me to several engineers and technicians, gave a tour of the labs, and reviewed how to use an oscilloscope and voltmeter, as well as the safety protocols. I have been provided with copious resources!

Right now I am focusing on the serial communication with the SeeStar Module and observing the power consumption of the system in order to study ways to reduce it.

Next week will consist of setting up a system in Raspberry Pi based on the work of one of the mentees.

Posted by [babadines](#) at Jun 08, 2017.

Hello!

This first week has been very busy. Here are some of the things I've done:

- Talked extensively with my mentors as to what my project should be given what data we have.
- Read 5-7 state of the art deep learning papers related to object detection and classification.
- Made a 8 slide presentation justifying my proposed deep learning network designs for my project and introduces my project.
- Setup and customized my computer to support the research I need to do: package managers, python packages, preferred terminals, github ssh keys, desk layout, printers, and learning how to use a MAC for the first time in 8 years.
- Started reading through various open source implementations of the algorithm, Fast R-CNN.
- Started learning Google's deep learning library Tensorflow.
- Researched the standard data format for object detection and classification.
- Started coding a data processing pipeline that will convert previous work to the format we require. Involves extremely precise extraction of video frames and conversion of MBARI style XML files to VOC style XML files.
- Refactored document structure and content of our shared Google Drive to accommodate a 10 week scale.
- Learned to make salsa chicken in an instant pot.

Nathan

Posted by [nyee](#) at Jun 08, 2017.

Hi everyone,

Most of this week was used to learn background information about previous works done by my mentors and the upcoming sea expedition. I read multiple papers written by Peter Brewer and Ed Peltzer that ranged from learning the best type of Gaussian distribution to fit Raman peaks of sea water, to what type of water was present in jellyfish mesoglea. I then learned how to work the lab's Raman spectrometer by calibrating it and looking at the chemical composition of a couple liquids and some plastic samples from a fish's gut (they were pretty large pieces, which makes me nervous how big the fish was...).

Posted by [djumes](#) at Jun 15, 2017.

09-August-2012

This page last changed on Apr 10, 2017 by [kgomes](#).

EYYY!!!

My last confluence and I am going to be the first one. When it started and George told us that the last couple of weeks were crazy weeks, I thought that it will not happen to me cause I will planning it very

well. But I was wrong and George was right. 😊

My project is almost done, so now I am writing my final project. On Friday, my mentor (Mike McCann) give the chance to share with him his project update, and I could present my project too. It was very nice, cause he ask me some question and now I am getting feedback for people who has started to use the tool that I have write. It's so exciting for me to know that some MBARI staff is using a code wrote for me. Another important date was yesterday, cause I present my PhD project in MBARI and we sent an abstract about my project to the American Geophysical Union's 45th annual Fall Meeting.

Now I am a little sad, cause I feel very good in here (MBARI, Monterey, California, USA) and my family too, and now I the program end. But it has been a really good experience that I have enjoyed a lot working and having a lot of fun at the same time.

Thanks to George and Linda for help us a lot, take care of us and offer us so many fun things to do, to all the intern, you all are very very nice and have been my little family during this time, to all the MBARI staff to be so friendly and help me in every little problem that I have had, specially Erich Rienecker, he is so friendly, thanks to him my family and me have had a very nice house, car, seat, and a very nice time on it. And the last thanks, but not less import, to my mentor Mike McCann to make all the thing very easy to me, be so nice, and help me so much to have a very good experience during my internship.

Have I said that I have enjoyed it a lot?????

09-June-2016

This page last changed on Apr 10, 2017 by [kgomes](#).

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10-August-2017

This page last changed on Jun 07, 2017 by [mage](#).

feel free to post your updates whenever you can, but by Thursday at the latest
CLICK ON THE ADD COMMENT BELOW TO ADD YOUR UPDATE

Comments

Hi everyone,

Great job on the presentations- those were both interesting and fun to see all of our hard work pay off. I spent this week working on the presentation as well as the paper. My project finished quite early during the internship so I sent a draft of my paper to one of my mentors yesterday and once I finalize his edits tomorrow, I'll be ready to leave. It's been a great summer and I'm bummed the internship is over, but I'm excited that my whole family is coming to visit this Friday. We'll see the aquarium and then head out to Yosemite for 4/5 days; a dream of mine since I was a kid. It was great getting to meet everyone and let me know if you're ever in the Midwest! I'll treat you to some beer, brats and fried cheese curds.

-David

Posted by [djumes](#) at Aug 09, 2017.

Goodbye & Good luck,

everyone did such an amazing job on their presentation, go team!
this past week has been very hectic, most of my time was spent working on my presentation and my paper, my paper is coming along pretty nicely. Tomorrow is the REU symposium, if anyone would like to stop by and check it out feel free to do so, the REU interns will present during the first half of the symposium. I'll be heading back home to the east coast very early Saturday morning...if you find yourself in the New York/New Jersey area in the future let me know I'll be happy to host you 😊
This summer internship has been such a great experience and I'm really glad I got to meet and work with you all 😊 good luck on your future endeavors and I hope to see you all again soon!

-Ash

Posted by [asanchez](#) at Aug 10, 2017.

Last confluence!

Hi everyone,

It's weird to see everyone's time here coming to an end. I hope you all enjoyed it as much as I did (and will keep to do so for the next two weeks). For those of you who haven't been to Costa Rica, or wish to go back as a tourist, (George 😊) feel free to hit me up for recommendations on what to do, where to go, what is and isn't worth seeing. If I'm down there I would happily show you around (sadly I'm there less and less nowadays).

This week in work: I shifted into full presentation gear last Wednesday. The process of getting my presentation to what it ended up being was pretty drawn out, mostly due to the myriad comments and feedback I received. It also took me a good amount of time to edit and select which figures to show and which data to focus my findings on--I have so much of it and had so little time to present it. In any case, this week was spent fully dedicated to these little details, which should hopefully save me some time editing the final figures of my paper.

Sad to see (mostly) everyone leave, it's gonna be pretty empty down here in the dungeons of building B. Luckily I'll have plenty to work on these next two weeks as I go back to my coastal pCO2 in air analysis. I am also going off to sea later today to recover a profiler which will be a good time.

Good luck on whatever you end up doing, hopefully we'll meet again in the near future!

Diego

Posted by [dsancho](#) at Aug 10, 2017.

Goodmorning!

Wow guys it was so cool to hear about everyone's research - y'all gave great presentations. Super impressed.

This week was some lab work and some work on the paper/presentation...I'm getting so close to the end of this project I'm so so excited. Unfortunately, we've had some bad luck with a kit that we need to continue, and it still hasn't been delivered even though it was supposed to be here on Monday. Once we get that miniprep kit, my next steps for the project are to finish up confirming that we have our sequences in the vectors (via gel-running and sequencing), clone them into expression vectors, then into our E. coli, and hopefully express the protein, purify it, and assay it to get it to [glowwww](#).

In other news, if you still want to see the vampire squid we collected on the Western Flyer, I guess this is your last chance? It's in EtOH in the fridge so it's not super pretty but I'm more than happy to show it to ya!

It's been a wonderful summer, and if any of you are in Monterey again before December, come say a quick hi! I look forward to hearing about all the awesome science stuff you guys end up doing in the future.

Cheers, and good luck to you all!

Chloe

Posted by [cweinstock](#) at Aug 10, 2017.

Signing off...

I can't believe that this is the last confluence update! This summer flew by- I knew it would, but it was even faster than anticipated. It was great to see everyone's presentations yesterday- we've done some impressive work for only 2 1/2 months 😊

Keep an eye out for the official species description of our pteropod! Stephanie and I are shooting to get it published before the intern papers are posted in November.

Also, if you're ever in Monterey- or want some more info on the REU program at CSUMB, let me know! You can always apply and maybe spend ANOTHER summer out here. '

Now, off to finish this paper..

Cheers,
Megan

Posted by [mbassett](#) at Aug 10, 2017.

Hi, and happy Thursday!

Loved hearing about all of your work yesterday - excellent presentations, everyone!

I stopped working on my project early last week since I reached a good stopping point and needed to focus on making figures for my presentation. My mentor, Mike, tested all of the code I wrote this summer and integrated it in with his, which means that I am a real-life contributor to the STOQS project! I enjoyed becoming a software engineer this summer, and that I got the chance to learn a wide range of computational tools that I will be able to use in my future research endeavors.

Please let me know whenever you're in SoCal. I live in a legit retirement community so will take any opportunity to hang out with people under the age of 55! And on the off chance that you find yourself in

Malaysia next spring, let me know. 😊

Best of luck, colleagues!

Rachel

Posted by [rkahn](#) at Aug 10, 2017.

WOW! I can't believe everything is being wrapped up and things are nearly over. I'm getting emotional writing my last confluence report. (':

Presentations were so fun and I love watching them. Y'all sounded so smart and I can't wait to say I knew some of you as early scientists, back in the day. Keep an eye out for the web pages as they start to go live. The first "Behind-the-Scenes" is up now, if anyone is curious: <http://www.mbari.org/speeding-sound-sampling/>

We're putting up Kelly's now, but there's been a few technical difficulties with pages reappearing even though we've tried to delete them-- classic WordPress.

It's been so great to work with everyone, and I'm really going to treasure my memories. The remaining blog posts will be posted shortly (better late than never, ha) and I'll put them to the Facebook.

If you're ever in Seattle, you've got a couch to crash on (or just a person to hang out with).

Emma

Posted by [ebueren](#) at Aug 10, 2017.

Hello everyone!

I am only working on my paper now and hope to have it done by tonight. Looking over my methods from the beginning of the internship I have noticed that I have learned a ton. I saw my presentation today. I want to apologize for all the 'uhh's and 'umm's. I had no idea how bad it has gotten. I'd like to thank everyone for listening to it. I hope you all enjoyed the bass.

These ten weeks went by too quick. I had an amazing summer here and wish it didn't have to end so soon. It has to be the best internship experience an undergrad could ever ask for. The presentations were incredible yesterday. I am honored to have been part of a group made up of such talented scientists and engineers. I learned a lot from all of you and I appreciate getting to know each of you.

I hope you all find happiness along all the routes leading to your success and can enjoy all the fruits of your labor.

~ Daniel De Leon

Posted by [ddeleon](#) at Aug 10, 2017.

Aloha,

I just wanted to say, I was so impressed by everyone's presentations yesterday. Some topics I knew nothing about and I thought everyone did a great job of communicating their projects to an audience like me. I am almost done with my paper! Hooray. Sad to be leaving California and the beautiful Pacific. I still need to make a plan with my mentor on my continuing work. I've applied to present my work this summer at a conference in October and am excited to hear back if I have been selected. I look forward to seeing what you all do with your lives. I thank everyone for sharing your knowledge and being awesome positive people, thanks for a great summer!

Mahalo

Alia

Posted by [athompson](#) at Aug 10, 2017.

1 Week left

Coming to the end of week 9 for me, feels weird knowing it's over so soon, sooner for most of you. Presentations were great, I enjoyed presenting my work. And my work continues, still trying to find out how small an acceleration I can measure with this sensor. Took steps today to majorly reduce vibration in the testing system, my mentor and I separated the hydraulic pump from the rig and now the sensor picks up much less motor vibration which is a very good sign. Hoping to have some good results in the next few work days then spend the rest of the time working writing the papers.

-Pierre

Posted by [pbaudin](#) at Aug 10, 2017.

Presentations are over! Everyone did such a good job. I really enjoyed hearing about everyone's work. For me, things are really wrapping up. 99% of my code is nicely documented, and I just need to finish up a few user instructions. The presentation took up a lot of my time this past week - and I really working hard on the paper now. I have everything outlined out, and am just working on getting it written out. I've had an absolutely fantastic summer and am going to miss all of you. I'm usually in Boston, but am sometimes in the Bay Area - reach out to me if you are ever in the around!

Nathan



Posted by [nyee](#) at Aug 10, 2017.

Hi Everyone!

First off, y'all did amazing on your presentations yesterday! It was amazing to see everyone's work come together after hearing little bits and pieces from all of you. This week has been pretty hectic with putting my presentation together and gathering all of my data. I finally got everything extracted from VARs yesterday afternoon and all of my data is officially collecting and I've finally got all of the values! So the rest of today and tomorrow will be putting my paper together. Hopefully it all turns out well!

Also wanted to say that if any of you are ever in the area again or ever in LA, I'll be happy to host you all and show you around SoCal if you didn't get a chance to go! It's been awesome working with all of you and I'm so happy to have spent this summer working with everyone!

Best of luck to everyone!

Victoria

Posted by [vassad](#) at Aug 10, 2017.

Hi everyone!

Well to finish up the internship I forgot to submit my confluence update on time (again). I loved seeing everyone's presentations on Wednesday! Everyone accomplished so much in the short ten weeks and worked such interesting and diverse projects. I spent most of this week finishing up my presentation and writing the paper. I'm leaving tonight, so I'm also trying to make sure I've dealt with everything that needed dealing with (got my collaborator's agreement in). I've had an amazing summer and learned so much more than I ever thought I would!

If anyone ever comes out east, I've got a couch in Connecticut! Let me know if you're ever around my area 😊

Safe travels!
Ellie

Posted by [ehandler](#) at Aug 11, 2017.

Week 10:

Worked with Danelle on getting our systems communicating with each other.

Gonna finish one more time lapse.

So long and thanks for all the fish!

Posted by [babadines](#) at Aug 11, 2017.

10-July-2014

This page last changed on Apr 10, 2017 by [kgomes](#).

This week, I ran multiple rounds of PCR on tissues from three different squid species and a nudibranch species. 2/4 rounds of PCR were successful (i.e. my primers amplified something). I ran the PCR products on a gel and cut out the most promising bands. I was able to get DNA from the bands, which was then sequenced. Good news: I have viable sequence for *Pterygioteuthis*! Basically, the photoprotein sequence that was found in a different species of squid appears to have similar genetic structure to the photoprotein sequence in *Pterygioteuthis*. Now I'll actually have something interesting to talk about during my presentation, even if nothing else happens during my project!

11-August-2011

This page last changed on Apr 10, 2017 by [kgomes](#).

woohoo - heading down the homestretch now! last week!! last confluence update. Titles due Friday - and I'll see you Monday morning in the Harbor View Conference room at 9 am.

11-August-2015

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11-July-2013

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12-July-2012

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Halfway point!

12-June-2014

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13-August-2015

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Comments

Aloha everyone, first I wanted to say everyone who helped with the cookie break on Monday, nice job. I thought you guys did excellent in making the cookies taste and look good. This week I did some more interviews and can start working on telling the story of how the HABS forecast model developed. My survey is getting great results, thanks to all of you who participated and shared. Sorry I tricked you with the lure of free food when there was none. I am still having trouble getting males to respond to the survey. WHATS UP WITH THAT GUYS!!!! I thought the seminar with Lauren was awesome and in addition to the q&a session we had with her in the Pacific Forum, Emma and I had a very nice lunch with her and a few other MBARI peeps. I also had a few meetings with my mentor and Fred about the plan for open house. I have been working on some augmented reality stuff for that too but so far the website is all screwy and its not working well. I hope to have this resolved beforehand. If the website doesnt get it together in time, I am thinking of a backup plan. I am really looking forward to kayaking on Monday. Not looking forward to running out of time. I have so much to do and am very optimistic I will get it all done



Mahalo for reading
Alia

Posted by [athompson](#) at Jul 12, 2017.

Hello everyone!

This has been a particularly productive week for me.

First of all, had a great weekend diving with George and Diego (I'm going to write a blog post about it, stay tuned!), sleeping under the sardine-nado at the MBAq, and admiring blue whales. I definitely recommend taking the opportunity to go whale watching for free. Also, thanks to everyone who tried my vegan chocolate chunk pretzel cookies and told me they were good.

I'd say that I've gone from, like, 0 to 50 this week. I was feeling a bit discouraged from spending so much time learning about machine learning and having nothing to show for it, until yesterday when the script I had started late last week was able to load some data and use a machine learning algorithm to recognize clusters in the data. HUGE step forward. Now I am finally doing some programming and will be spending the remainder of the week (and maybe the remainder of the summer, we'll see how this goes...) adding onto my script so it can do more machine learning things.

I've also been working on a STOQS graphic (STOQS being the data visualization software that my mentor created) for the STOQS webpage, and so we can get some STOQS merchandise, namely coffee mugs.

Have a lovely weekend!

Posted by [rkahn](#) at Jul 12, 2017.

When the stars align...

...or in my case- DNA sequences! The mystery has been solved- the software I'm using to clean the sequences was incorrectly assigning the forward and reverse reads, which was making the cleaned sequences wonky. I spent the earlier part of this week re-aligning the sequences and cleaning them up. I'm thrilled that my sequences are now falling out with Stephanie's- HUGE relief!

The rest of this week, I've spent working on the line drawings for our species description and looking up Latin and Greek words to come up with a species name for our Pseudothecosoma. I was hoping for something like "mustached dancer" or "tumbling mustache," but mustache in Greek is mytax and doesn't blend well with other words easily. I'll keep looking... You may be asking yourself "why mustache and dancing/tumbling?" Stop by my desk in the midwater lab and I'll show you some cool photos and videos!

If that news wasn't good enough for you- I'm going on the Western Flyer cruise next week! We're leaving Tuesday evening and getting back the following Tuesday night. I'm so excited to go out and spend time

learning about the variety of projects going in the lab. We're also hoping to collect some more of our species so I can get a good look at them for the more detailed line drawings.

Cheers,
Megan

Posted by [mbassett](#) at Jul 13, 2017.

Week 5:

I spent this week adding live data visualization functionality to the benchtop simulator software. It was a fun rabbit hole to dive down, found a open source software library and made it work well for my purposes with some tweaks to improve performance. Learned about threading which is a programming technique for increasing responsiveness in programs by splitting asynchronous tasks into separate threads that the different cores of the CPU can run simultaneously. The benchtop simulator software is now really finalized and finished. The next 5 weeks will focus on the new project which we're calling the Inertial Current Profiler or ICP (which is an unfortunate acronym because of that weird music group). I also need to start putting together my presentation and continue work on my project report.

-Pierre

Posted by [pbaudin](#) at Jul 13, 2017.

Hello everyone,

I'm glad to report that nothing in the Brewer lab is broken yet. After crunching some numbers in Excel, I looked at pure water's the change in enthalpy versus pressure and saw that the slope is nearly zero. In other words, pressure doesn't have a strong effect on the total heat content of a pure water system.

After seeing this, my mentor suggested I ramp up the pressure to 3000psi (which simulates a depth of roughly 2000m); however, the instrument that was created here by MBARI engineers to do that has a limit of 1500psi. My mentor just said to ignore it (the worst that would happen is an O-ring pops off and water leaks), made me question what the purpose of science is if you can't have a little fun, and said that a different mentor would help clean it up if it did leak. After spending almost all of Monday in the dark collecting these spectra at high pressures and praying for strong O-ring seals, we did not have any (visible) leaks! I'm currently processing that spectra and I'll be taking the instrument apart at some point to ensure it's working properly. More to follow later.

-David

Posted by [djumes](#) at Jul 13, 2017.

Hey guys!

I have spent this week working on the same thing I was doing last week, which is going through the VARS time-series images from Station M and counting all of the Macruids that are present. Once I get through a full pulse I am going to start planning the type of analysis I want to do in terms of statistical tests and what not. I will be comparing the fish counts from the pulses I get through with oxygen data and climate indices. I am really interested in seeing what the results are going to be. Hope everyone is

having a great week! 😊

- Danielle

Posted by [dfabian](#) at Jul 13, 2017.

Hi friends,

Busy busy busy, but somehow there's still a million things that need to be done! Oh well, that's the way the midpart of projects always goes—I'm making some dents and feeling optimistic that I'll get there. (: I got several blog posts up (yay!) and all the intern profiles are in, so I'll be putting the last few up soon! In the meantime, I've been working on designing the ESP page layout as we come up with new ways to dice the different topics and represent them. I have started writing, although there's still a lot of copy and pasting information around. I'm meeting with Jim and Nancy today to go over my progress and figure out next steps/which pages should be prioritized and done first. Tomorrow I'm going to dig in and really work on Dr. Benoit-Bird's website.

DON'T FORGET TO GUESS: <http://www.mbari.org/animal-plant-mineral-or-man-made-3/>

This one might be a little easier than the last two, so try to be as specific as possible for a chance to win!

Yesterday with Lauren was GREAT! We went to lunch and I had a chance to asking her a bunch of questions, plus then we had our intern forum and I got ask even more. I feel like she gave me some really helpful advice and I was super excited to learn about the ShareScience program. A database of friendly and open to interviews scientists is SO valuable to science journalists and I'm really glad to see that groups are working to foster better relations between scientists and media. It was also really neat to see that she had a microbiology background like me but is now working in earth science (so there's hope for this bacteria nerd yet) and I loved talking to her about her career pathway. Also, I'm back on Twitter/Instagram game so keep an eye out for some fire emoji posts.

Also had a lot of fun whale watching this week. Saw a BLUE WHALE (100% worth the subsequent sea sickness), and then went straight to the aquarium sleepover which was great. Shout-out to Ellie for making like 18 dozen cookies and only cutting me off after I'd eaten probably a dozen.

Emma

P.S. If I look really stiff and uncomfortable (and/or smell like Bengay or Tiger Balm), it's because I accidentally threw out my back in a minor way. No medical emergency, just a bit sore! (:

Posted by [ebueren](#) at Jul 13, 2017.

Greetings!

Wow I can't believe we only have 4 weeks left...I feel like I only just got started on my project, and I'm hoping I can finish it in time! Aah!

This week has been super fun and I've learned how to do a lot of things that I only barely remember from college lab courses. Last Tuesday I made cDNA from transcriptome RNA that was extracted from vampire squid arm tips (we used the tips because we know there is bioluminescence there, and is the most likely place to get the right sequence). I spent the rest of last week designing primers so that I could amplify what we hope is the gene for the vampire squid photoprotein. In addition to making primers that had the right melting temperatures/GC content/structure, I thought that I had to make unique primers that would exclusively amplify the photoprotein gene, so I spent a lot of time blasting my primers against a database to try and find ones that wouldn't complement any other sequences from our transcriptome. Turns out I don't really need to be that specific for the amplification, so I ordered a ton of not-quite-as-specific primers on Monday, and those came yesterday. So I ran a PCR yesterday afternoon (sorry I missed the Q&A), for three different gene sequences that might be the photoprotein and I'm running those amplifications on a gel today to see if we amplified the correct sequences. I'll find out in approximately 20 minutes. Keep your fingers crossed y'all.

If my gel bands look like they're the right length, I'll cut the bands out of the gel, purify the DNA out of the agarose, and sequence the purified DNA to see if it matches the sequence from the transcriptome (the one I designed my primers from). If it looks right, I'll clone that sequence into an expression vector and try to express it to confirm bioluminescence. Whee!

Happy thursday!

Chloe

Posted by [cweinstock](#) at Jul 13, 2017.

Another week goes by...

And progress is being made. This week I finalized the content of my first set of analyses (observations, lagged cross-covariance, daily and upwelling-scale band-pass filters, seasonality of daily pH) of the may-december 2015 time series of OA1, OA2 and M1. I made most figures presentable and formatted the introduction and methods sections to fit our final paper's guidelines.

Yesterday I began working on expanding these analyses to the most recent time period where data is available for all three moorings (october 2016-july 2017), which is exciting as I get to test whether my conclusions hold during a different time of the year (unlikely for most) and in this most recent, very wet winter and spring.

I'm also thrilled to go on a short maintenance dive of OA1 tomorrow aboard the Paragon. I'll let you know how that goes next week.

Happy foggy days,

Diego

Posted by [dsancho](#) at Jul 13, 2017.

Hi Everyone!

This week has flown by crazy fast. I spent most of Monday extracting my data from VARS and finally getting everything into Excel sheets to start analyzing! Also setting up the cookie break with Ellie and David (I had an awesome time doing that you guys! Tuesday was a lot of the same thing, Danielle helped me out a bit and I was able to find a better way of organizing and calculating all my data. Spent most of yesterday either talking with my mentor or at the seminar/with the seminar speaker. Today so far has been extracting my length measurements from VARS and sorting everything to the right individual. It's been really cool seeing some correlations and how my hypotheses have been so far!

Other than that I've also been working on an abstract for SACNAS with the REU, and applying for the travel scholarship as well.

Hope everyone's weekend is amazing!

Victoria

Posted by [vassad](#) at Jul 13, 2017.

Hello!

I have started making progress on the pre-processing of these spectrograms. There is a lot of great code on github from people who have similar sound analysis work on whales. Danelle was awesome and kind enough to push that onto the repository for me so I could start manipulating it to fit our specific whale call parameters. I have also been looking into specific CNNs that might help me get a better idea of how the architecture of our CNN will turn out.

I have also dedicated time into the SACNAS application that is due this Friday. Just got back abstract revisions from both of my mentors and will be submitting it today. It seemed odd to apply for a presentation that I am ready for yet so we'll how it goes.

The cookie break was awesome! I appreciate all the work you guys put in to making them.

Enjoy the weekend,

Daniel

Posted by [ddeleon](#) at Jul 13, 2017.

Week 6:

At this point the SeeStar (RPI) is to operate as a dictator to the Feather M0, while the Feather M0 acts as an intermediate processor between the SeeStar and its sensors. The goal is to have the SeeStar simply order the Feather M0 to command sensors to record a sample and go back to sleep!

Thus far, I have four serials that can read and store data onto an SD card with three that can serve as means for communicating to sensors and one reserved to talk to the SeeStar. I experimented a bit and daisy chained the pins so that they all talk to their subsequent serial. I also mapped out which pins belong to which SERCOM along with its associated keywords and pads (syntax and assignments were big issues).

I also got to the point where the Feather wakes up after a user presses a key and then goes back to sleep. Essentially, that is the main goal of the project, but I am concerned about how the Feather discerns this wake up call. I have to make sure that the Feather wakes up from a serial signal not just a digital one.

Posted by [babadines](#) at Jul 13, 2017.

Hi Everyone!

This week I was able to make great progress on my research, yay!
I'm hoping I'll be able to complete my project by the end of the internship (fingers crossed). My mentor and I are currently working on another algorithm that can detect the max chl. concentration in the pct data which includes chl, temp, sal, O2, and par. We're looking for seasonal variability and daily variability as well. The programming part of the project is coming to an end and the data analysis is to begin (so exciting!). Also in the works this week: my SACNAS application! (deadline tomorrow) I've submitted the abstract earlier this week following Francisco and Monique's edits and approval. currently working on the travel scholarship application, it requires a recommendation letter, CV, and personal statement.

Thank you guys for the delicious cookies on Monday! I'm looking forward to round 2 of kayaking in the slough next week!

have a great rest of your week 😊

-Ash

Posted by [asanchez](#) at Jul 13, 2017.

Hi all!

I had a great weekend with pie making, whale watching (2 blue whales!!), aquarium sleeping, and huge amounts of cookie baking! Thank you so much to everyone who baked cookies and made the first intern cookie break a success! We had seven different types of cookies and banana bread.

Most of my day-to-day activities remain the same. I sample and run tests on my cultures in the mornings and work on graphing and analyzing data in the afternoons. Growing my cultures under seven different light levels at the same time has been working really well! We're seeing patterns emerging in growth rates and fluorescence. Next week we're going to do more intensive photochemical analysis on the cultures to study how their photophysiology changes at the varying light levels.

Unfortunately we've had some setbacks in the chemostats. We've had problems with the pH falling in the chambers, and could not figure out why. We had been continuing with the experiment despite this, and this weekend we extensively sampled the chemostats to get a baseline for the next phase of the experiment. On Monday, my mentor decided we needed to take a step back and figure out why the pH was decreasing and the growth rates were lower than what we have been seeing in the incubator cultures. So, we ran a bacterial test and tried changing some settings on the chemostats. Our suspicions from last week were sadly valid and two of the four chemostats have been contaminated. As of yesterday things are looking better though! We're now giving the chemostats antibiotics every couple days, which don't seem to be hurting the algae at all (yay!). Lowering the amount of air bubbling into the tanks seems to have solved our pH problem, so we're going to go ahead with the CO2 and NO3 experiment in the next couple of days!

My family is visiting this week, so I'm going on another whale watch on Sunday!! Hope everyone has a good weekend!

Posted by [ehandler](#) at Jul 13, 2017.

Hey everyone!

To complete my project, I decided to go back to an approach that I used earlier this summer. I manually annotated (drew boxes on) around 600 images. These images will be used as training data for my neural network. After I train the neural network on this data over the weekend, I will use the neural network to automatically create annotations on new images. I will then go into the iterative cycle of correcting these predicted annotations, and integrating them back into my training data.

For my new training data, I revamped my directory structure and re-wrote a lot of the code. It is really great to see how much better I've become at managing data and code-reuse while working on three different machines.

I also did some more work on the effects of interlaced video on convolutional networks. I put my code in a loop so I could see a bigger distribution of results.

Nathan

Posted by [nyee](#) at Jul 14, 2017.

13-June-2013

This page last changed on Apr 10, 2017 by [kgomes](#).

14-July-2011

This page last changed on Apr 10, 2017 by [kgomes](#).

This has been a week of good progress as I finished and tested a prototype version of my key for deep cydippid ctenophores. Over the past few days I have expanded upon this base by adding images in both the stomadael and tentacular place, to provide a visual method to verify the classification.

I have also merged my key with a table of characters that Steve created for the described species. My aim for the rest of the time here is to gather the same level of morphological detail for the described species so that they can be fully integrated into the key. Hopefully I will have time to perform a similar process for the undescribed deep lobate ctenophores also, rounding out the key and bringing it closer to completion.

14-July-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

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14-June-2012

This page last changed on Apr 10, 2017 by [kgomes](#).

I am testing this

15-July-2010

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15-June-2017

This page last changed on Jun 07, 2017 by [mage](#).

feel free to post your updates whenever you can, but by Thursday at the latest
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Comments

Hi All,

Hope everyone's week has been amazing!

This week I set up a timeline with my mentor as to when each step should be done (approximately) and hopefully I'll be able to stick to it! I've been doing mainly research this week, reading up on the deep-sea enteropneust, or *Tergivelum baldwinae*, which is the enteropneust I will be looking at. I've also read a few other papers on carbon flux in the deep sea and how that may have affected other organisms, such as holothurians (Linda I read a few of your papers!). After taking extensive notes I've started writing my introduction for my paper which I intend to have a rough draft done by the end of this week. I also had the opportunity to go on the walking tour with the board earlier this week during DOEST and it was awesome getting to see all the other work that has been done here at MBARI!
Victoria

Posted by [vassad](#) at Jun 15, 2017.

This week I solidified my plan for my project, and got everything started. The algae cultures are growing in the Chemostats (a system that lets us control the nutrients available to the algae) and in vessels in an incubator. Yesterday, we started the Chemostat experiment. We're growing the algae under different light regimes (sine wave, square wave, and always on) to study how this impacts their physiology. I'm going to sample from the Chemostats once every day and multiple times a day when we do periods of high resolution sampling to check how they change their behavior throughout the diel cycle. When this phase of the experiment is done, we are going to change the levels of nitrate and carbon dioxide to study how they respond to different environmental conditions.

I'm using the cultures growing in the incubator for a growth-light experiment to look at how their photophysiology changes under different light intensities. We're starting them at a low light level (10 micromols) and they are already showing some changes! The cell size seems to be shrinking and the chlorophyll increasing. These responses allow them to harvest more light from the low light condition. On Monday I went out on the Rachel Carson and had a great time! We collected deep sea corals, anemones, sea stars, and a flapjack octopus.

Posted by [ehandler](#) at Jun 15, 2017.

Pipetting is not like riding a bike...

Last week I touched on how I had to dig deep to remember the concepts and techniques I am using for my summer's research. It looks like I didn't dig deep enough because I've been pipetting wrong for a week and a half! I knew something was up because my volumes were off, but couldn't figure out what it was until I watched my mentor pipetting something. The mystery has been solved- I was doing it wrong.

In spite of my wonky pipetting, I have been getting results! Today I'm working on PCR for the rest of the samples we have and will hopefully be sequencing tomorrow.

I also went out on the Rachel Carson on Monday and was sicker than I've been in LONG time...
Dramamine "Naturals" is a bottle full of lies- I'll be going back to my scopolamine patches.

Onward and upward.
Megan

Posted by [mbassett](#) at Jun 15, 2017.

After hours of playing with the sound analysis tool Raven, I have finally been able to start data mining. I'm hoping today I can collect at least 20,000 blue whale b calls using Raven's band limited energy detector. This week I have also decided to use a convolutional neural network as my machine learning classifier (more to come on this decision later).

I went on the Carson tuesday and I did a good job of not getting sick. I wasn't able to stay in the cabin for too long to avoid nausea, and as result of that, I couldn't get any work done on my project unfortunately. It was an amazing experience and I was able to see the installation of the new hydrophone that collects the audio I am using for my project. I also saw dolphins and humpback whales really close to the vessel.

Oh, and the Warriors won!

Posted by [ddeleon](#) at Jun 15, 2017.

Week 2!

This week I was able to meet my mentors, Monique Messie and Francisco Chavez, yay! we discussed our research project of characterizing Zooplankton Diel Vertical Migration in Monterey Bay and how we're going to use the given dataset of acoustic backscatter profiles to do that. This week, We began writing a Matlab program that traces DVM for a random day within the time-series, this looks at the data manually as single days and the purpose to get a 'feel' of the data before automating DVM tracing overnight. Currently, I'm working on my research question for the REU as well as the research planning guide and project timeline.

I've also been reading up on Diet Vertical Migration Behavior, Current Biology, and programming too!

Ash

Posted by [asanchez](#) at Jun 15, 2017.

I can hardly believe that it's been almost two weeks already... yikes.

We returned from sea yesterday. The cruise was awesome, stop by my cubicle if you want to see cool pictures!

Since I was at sea, I didn't accomplish much of my actual work. The combination of sleep deprivation and drowsiness from the rocking of the ship was not conducive to productivity. When I tried to run STOQS from the ship, it didn't work. It took me almost the whole cruise to figure out how to get it up and running again, and then I was able to load some data sets into it. I'd consider that an accomplishment, since that was what I had hoped to achieve before leaving for the cruise.

I am counting the days until my mentor arrives... we're down to 4 now. If I seem extra happy on Monday, you'll know why.

Cheers.

Rachel

Posted by [rkahn](#) at Jun 15, 2017.

Well, I'm officially back on land and the number of potential projects I have collected over the past week has increased. We did catch a vamp, but he was just a wee thing and we wouldn't have enough arm tip tissue to get a reliable sample, so we sent him over to the Aquarium. They're working on a tank that's just right for the vamp so he won't die. My fingers are crossed.

So, for the rest of the summer, I will likely be trying to identify and clone the luciferase enzyme in:

- a) the mystery mollusc
- b) ostracods
- c) vampire tissue we have frozen
- d) a sea cucumber

and who knows what else. I'll be busy and excited.

Today I'll be packing up the ship with the Haddock lab, and maybe do some bioluminescence assays this afternoon. I'll also be daydreaming about octopus. Wheel!

Cheers,

Chloe

Posted by [cweinstock](#) at Jun 15, 2017.

Hi everyone!

This week we started to solidify my project. I'm going to be working with James Birch to update the website for the Environmental Sample Processor (ESP) as my larger project, because there's a lot of older content from before the website changed. It all needs to be looked at, edited, and updated. I'm also working on updating the profile page of Kelly Benoit-Bird, who is doing acoustical ecology in the bay (which is REALLY COOL). I had a chance to see her present to the BOD during DOEST and took a bunch of pictures. I'm also going out with her Monday/Tuesday of next week to take more pictures and see what the Rachel Carson is like!

I've also been working on writing/editing new descriptions of the Wave Glider Hot Spot and an autonomous cytometer. Both are on their way to completion and I'm hoping they'll be done soon!

The other thing I've been working on is co-running an updated interns blog with Alia. I spent way too much time trying to figure out the aesthetics of the blog (which I learned is not easy on a free Wordpress account) but I think it's officially ready for content, so Alia and I will be connecting with people next week to start getting some intern profiles up and running, as well as a few other fun ideas we have!

Emma

Posted by [ebueren](#) at Jun 15, 2017.

Week 2:

The communication between the current SeeStar modular setup is functional. I can upload code onto the Arduino using the FTDI cable and can communicate and receive the Help Display and Functions through a regular serial cable. Chad taught me how to read a schematic diagram and I gained a greater appreciation towards their design.

I set up the Raspberry Pi in order to recreate a student mentee's design of SeeStar. I am having a problem with connecting to networks and re-installing the operating system. I may have also shorted a card reader? 😞

As cumbersome as my trivial problem is, it has motivated me to reach out to a handful of staff around me. They are teaching me how to connect to networks, ensure that addresses are assigned correctly, and navigate through the terminals. Eric, one of the software engineers lent me his card reader. Perhaps later today, I will receive soldering lessons from Jose, an electrical engineer. My biggest accomplishment for this week was getting to meet and learn from many of the bright minds and professionals at MBARI.

Posted by [babadines](#) at Jun 15, 2017.

Hello everyone,

I will not be in the interns meeting on Monday because I will be meeting with Mary Miller at the San Francisco Exploratorium to see what they are doing and have done with CeNCOOS data/ monitoring information as well as their augmented reality exhibits. I am very excited to visit the Exploratorium, it will be my first time there. At the same time I feel it might be intimidating to see all that they are able to do with augmented reality given the money, time, resources and expertise they have to spend on development. Regardless it is important to see what has been done in order to imagine what can and should be done. That is what I spent a good bit of time doing this week, was looking at what has already been done to not step on anyone else's toes and at the same time see what is feasible to do in 8 weeks (whatttttt!!!!) My mentor and I came up with some short term projects I can work on in the mean time like updating the HAB timeline and perhaps making it a bit more interactive/ engaging. A side project I am doing for my mentor that I thought would also be helpful is to create a template for reporting on the google analytics from the CeNCOOS website. I got to speak with the seminar speaker Heidi Cullen for a short bit of time and I gained some insight on the informal side of science communication and education which I am not as experienced. I worked with Emma on blog design and ideas for content. We will be doing a sort of game each week with microscope pictures we take of things we have collected in and around MBARI that you can guess what it is in the comments section so be on the look out for that. We haven't decided if we have the resources to do any prizes. So winning the game (not the lure of a prize) might just be the gratification and motivation to play. I also spent a fair amount of time this week networking and eating free food.

Mahalo
Alia

Posted by [athompson](#) at Jun 15, 2017.

I spent most of this week familiarizing myself with MATLAB, as it is the software that I will be using to analyze data. I then practiced fitting 5-Gaussian peaks to previously collected water spectra (both sea water and pure water) at different temperatures to see how the peak areas changed. These were compared with the values my mentor obtained to see if our peak-fitting methods were the same. They worked the same for the pure water but not the sea water (I was using an older MATLAB code that had different starting points, so I have to re-do those). Now I'm looking at how the 5 peaks change for pure water at different pressures (from 0-1500psi) at a constant temp. I also graduated Sunday, so if you know any chem lab jobs that don't require 3+ years of experience and a Masters degree, let me know!

Posted by [djumes](#) at Jun 15, 2017.

Hello fellow interns!

I hope everyone is having a great week! This week I have been working on collecting as much Pacific hake data as possible from multiple sources so that I can attempt to find a pattern occurring between climate change and the different life stages of Pacific hake. It has proven to be a challenge so far, due to different datasets undergoing different methods, as well as different spatial and temporal scales. I had a meeting this morning with Linda, my mentor Ken Smith, and a few other people from the Smith lab to discuss my thesis and how to go about determining which datasets I should keep and throw out, as well as what steps I should take next for analyzing the data. It is going to be a lengthy process but I am very excited to finally begin working on my thesis and am confident that I will yield some interesting results! For the rest of the day I will be doing a lot of background reading and cleaning up the data that I have collected so far. It has been a productive two weeks! 😊

- Danielle Fabian

Posted by [dfabian](#) at Jun 15, 2017.

Hello everyone!

Here are some of the things I've been working on:

- Read through a few papers related to object detection, classification, and image segmentation in images.
- Made a program to process previous work into a new data format. It involves video frame extraction and some text processing.
- Configured my remote connection to one of MBARI's powerful computers. Also set up the user account to do the machine learning workloads.
- Set up my desktop computer to also run heavy workloads.
- Started looking through and thinking about how to annotate/fix up my dataset.
- Learned some more basic Tensorflow.
- Networked with a lot of people.
- Started thinking about my final paper. I made a google doc so I can just start writing things down. I'm not the best or fastest writer so starting early is necessary for me.

Nathan

Posted by [nyee](#) at Jun 15, 2017.

Hi All,

So this was the first week of work for my project and things are going well. I'm tasked with creating a benchtop depth simulator for use in testing the Coastal Profiling Floats. These floats go to set depths in the ocean and take all kinds of measurements before resurfacing. They measure depth using pressure sensors. My job is to trick the pressure sensors with compressed air controlled by a regulator that I, in turn, control with the computer. I've finished a simple simulator already and so far it's looking very possible that I may finish the entire proposed project by the end of next week. Hopefully I won't be eating my words next Thursday but we'll see. If I do in fact finish the complete simulator next week, that will

leave me 8 weeks to try out some other interesting things on the float. I've talked with my mentor about several possibilities including implementing an acceleration sensor to determine drift from undersea currents.

Also went out on the Paragon this morning to help deploy and retrieve a float. Motion sickness is a thing.

Overall things are going very well.

-Pierre

Posted by [pbaudin](#) at Jun 15, 2017.

16-July-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

Speaking to the TCLers at the MBA was such a great experience and I hope to continue public speaking – it's so rewarding! Aside from that great start to the week, I have been working on my experimental setup for my abalone project. Starting on the 16th, I will be in the lab practically all hours of the day to sample and take AWESOME pictures of my developing abalone! Looking forward to finishing up this part of my project and begin data analysis!

16-June-2011

This page last changed on Apr 10, 2017 by [kgomes](#).

Please leave your notes here (what did you do this week and what will you do next week)?

16-June-2016

This page last changed on Apr 10, 2017 by [kgomes](#).

Click on the AD!Current profile.png!D comments box below to post your update

17-July-2014

This page last changed on Apr 10, 2017 by [kgomes](#).

I was glad to not have gotten seasick on the Rachel Carson this Monday -- staring at the horizon really does help. The highlight of the day was seeing both Pacific whitesided dolphins and right whale dolphins swimming in front of the boat!

Back on shore, I'm excited that my code generates data. It'll be exciting to run lots of data through it to see longterm trends in ocean activity.

17-June-2010

This page last changed on Apr 10, 2017 by [kgomes](#).

To add your update, add a comment. Things to put in your update: What you did this week, what you think you are going to do next week, what is going well or isn't going well and, for this first update, what you would like to get from your 10 weeks here at MBARI.

24-June-2010

This page last changed on Apr 10, 2017 by [kgomes](#).

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01-July-2010

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18-July-2013

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18-June-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

19-July-2012

This page last changed on Apr 10, 2017 by [kgomes](#).

19-June-2014

This page last changed on Apr 10, 2017 by [kgomes](#).

2-July-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

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20-July-2017

This page last changed on Jun 07, 2017 by [mage](#).

feel free to post your updates whenever you can, but by Thursday at the latest
CLICK ON THE ADD COMMENT BELOW TO ADD YOUR UPDATE

Comments

Hi everyone,

After collecting 70 spectra with the Raman and changing temperature and pressure, I found that the change in enthalpy is relatively small and does not change largely based on pressure. Temperature has a much larger affect on the enthalpy and hydrogen bonding index of water, which pairs nicely with previous work done by my mentors. They even used some of my data in their 2018 budget proposal, indicating that 3000psi is nice to use in the lab, but measurements taken at even higher pressures (6000psi = ocean depth of 4000m) would be ideal and only accessible by deploying the ROV. Now since this data set is wrapping up, I will most likely start a similar experiment with salt water and see if those changes in enthalpy look similar to the pure water graph.

Highlight of the week: seeing whales outside this morning!

-David

Posted by [djumes](#) at Jul 20, 2017.

Happy Thursday!

I have been continuing to work on my machine learning script and making progress. In my post last week, I mentioned that I had written a script that extracts a specified chunk of data and automatically recognizes clusters in the data points. Since then, I have added a method which flips through a chunk of data at a specified time interval and identifies clusters in each interval (e.g. I can flip through a day's worth of data in smaller ten-second chunks and identify clusters in each ten-second interval). The reason for this is that we hope to one day be able to flip through the data and track specific data clusters over time.

My current task is to write another method which saves the clusters recognized by the machine learning algorithm back to the database where the data is stored. I have an error-free script but it doesn't seem to be doing exactly what I want it to do, so I will be working on that today and maybe through early next week. We'll see. Progress here seems to come in spurts.

Looking forward to seeing Liquid Robotics tomorrow - it should be pretty cool!

Cheers,
Rachel

Posted by [rkahn](#) at Jul 20, 2017.

On an island...

...well, not a literal island. We set sail yesterday on the Western Flyer after being delayed a day. Because the wind is blowing pretty hard (~23 knots last time I checked) we're staying in the bay and sampling around the M1 site. So far this trip has been great! We trawled last night and were up into the wee hours of the morning sorting through our catch and processing samples. Today, the goal is to fill the MRS system with Galiteuthis, drop off the MRS, then start collecting specimens on the "wish list." I'm looking forward to learning more midwater species and getting my hands dirty in more trawl catches! See you all on Tuesday!

Cheers
Megan

Posted by [mbassett](#) at Jul 20, 2017.

Good Morning all!

I'm in awe at how quickly this internship is going by! this week has been no exception..we began our Monday morning with an all interns kayaking trip at Elkhorn Slough estuary. While there, we saw purple striped jellies, Kelp crab, harbor seals, and too many adorable otters! later on we held a root-beer float/

cookie break and had a wonderful turnout 😊

Tuesday was a full-work day that I used to catch up on project stuff and was able to organize, clean out, and annotate my Matlab files in preparation for our final research outputs and analysis.

On Wednesday, Diego, Emily (REU intern), and Myself joined Timothy Pennington and Marguerite Blum on their tri-weekly CTD cast, we were put to work with initial processing of water samples at 3-different stations, we all had a great and fun time!

Today and tomorrow the REU will be keeping us busy with a boating safety workshop that will culminate with us driving the boats, which I'm super excited for 😊

Have a great weekend & see you all next week!

-Ash

Posted by [asanchez](#) at Jul 20, 2017.

Week 7:

I accomplished the Dictator aspect, where the SeeStar orders the Feather to wake up, record samples, and put its channels and itself to sleep. The Feather goes to standby mode and wakes up through a digital interrupt. I have 2 ports acting as sensors, a SeeStar port, and a port for producing dummy data. Essentially, there can be 3 ports for sensors and 1 for the SeeStar. Users can indicate which sensor(s) should take samples and write to the SD card before the Feather returns to sleep.

The next goal is to include a former student's code by the end of next week, and have it communicate with Danelle's SeeStar RPi system. One of the libraries, SoftwareSerial.h, however, does not carry well onto the Feather due to the pin-muxing.

It was a short-lived celebration on accomplishing one task, and there is a lot of pressure on integrating past work so that an adopted mentor can test their system by next week, but at least this is good hard deadline to keep me motivated on making a significant contribution to the project before the summer ends.

Side note : I want a better method for finding how much current is drawn.

Posted by [babadines](#) at Jul 20, 2017.

Noooooo! I just wrote up a post and then accidentally refreshed. Dang it.

The short and sweet version is kayaking was great! I loved seeing the otters and I got to see one open up their food with a rock, so that was great!

For Kelly Benoit-Bird (KBB), I've written two drafts of different behind the scenes articles (one about the hydrophone on the Paragon and another about the common murre bird's acoustic signal) that are going to be edited/revised soon by KBB. I've also started working on her website a bit, but that's been a bit tricky. It's very well-written to start, so I might have wasted some time trying to rewrite it when it was already pretty good. Still, there's plenty of other stuff to be done, and my next task for that is to start working on adding a few pages about her instruments, acoustic identification of animals, and a few snapshot stories of the type of research she does.

For Jim Birch, I think we officially have a final skeleton for the website and I've started writing content now. It's going full speed ahead!

Finally, had a great morning seeing the whales outside! I got some blurry photos of some flukes, an OPEN MOUTH during a lunge feed (maybe ???), and some good spouts.

P.S. Guess the mystery pic! <http://www.mbari.org/animal-plant-mineral-or-man-made-4/>

Emma

Posted by [ebueren](#) at Jul 20, 2017.

Hey guys!

There are 4 whales breaching super close to the beach right now! I was just watching them from my mentors window. This week has been fun and productive! I really enjoyed kayaking in the Elkhorn Slough on Monday. It was nice to be out there again. I spent most of my time this week going through VARS images from Station M and doing individual counts. My goal is to get through a full pulse and compare the data to climate indices and oxygen data using a cross-correlation statistical method. I am excited to see how the results turn out! I was able to obtain a second computer monitor, which has made my work so much easier. I hope everyone is having a great week! 😊

• Danielle Fabian

Posted by [dfabian](#) at Jul 20, 2017.

Morning!

So this all is going by way too fast and I only just feel like I'm really getting the hang of what I'm doing...and actually understanding the why/how part. I've been amplifying, running, confirming, PCRing, purifying, sequencing, and comparing DNA and RNA all week, and almost everything has gone really well, with my first "failed" sequencing reaction yesterday. But almost all of my sequenced DNA sequences have been matching up with the transcriptome data that I based my primers off of to originally amplify this DNA, which is really exciting because it means that our transcriptome sequences are reliable, and might actually be the gene that we're looking for.

Today I'm going to be troubleshooting and confirming that we actually have DNA transcript in the product that we used for our failed sequencing results, aligning the sequences that we do have to see if they match the transcript, and making some primers to bind in the middle of a long DNA sequence to see if we have get higher quality sequencing results. Then I'll be setting up a new sequencing reaction to see if I can get some better results. Lastly, I'll be doing some research on how to clone my sequence into a vector and maybe creating some primers for that.

In general, my next steps are to learn how to clone this sequence into a vector, and then into bacteria and try to express this protein, which would hopefully confirm the sequences we've found and isolated from both the transcriptome and my amplifications as the bioluminescent gene --> protein in vampire squid. Keep your fingers crossed for me!!

Cheers,

Chloe

Posted by [cweinstock](#) at Jul 20, 2017.

Hello everyone!

I spent two days this week on shipboard missions, and it felt great to go back to sea. My first trip was last Friday on the Paragon with Jeff Sevadjan and Chris Wahl to service the OA1 buoy. It didn't go quite as planned as there were some voltage issues created by the boat's battery that didn't let us bring the buoy onboard. We ended up servicing most of it from the side of the ship (quite the effort) and attempted to change the pH sensor underwater at the start of our dive. The old pH sensor didn't come out after half an hour of bobbing right below the surface, so we had to secure it again and proceed with our scheduled dive to check the chain and general state of the mooring. It was a really cool dive because there were sea nettles (the jellyfish) everywhere as we descended, and it added natural beauty to a routine work dive.

My other trip was yesterday on the Rachel Carson with Tim Pennington, Ash and Emily (REU intern). We helped draw and process water samples from the rosette and ate lots of food and took a couple of naps. I also saw a mola mola and many humpback whales on the way back, it was really cool. If you haven't been out I'd highly recommend it, unless you are extremely prone to seasickness--then it wouldn't be so much fun.

The other 3 days I spent working on the time series data from the three moorings (OA1 and M1, which I got to see this week on each boat trip, and OA2). I was able to finish all the analyses of the most recent time period and now I have two different time periods that I can compare (part of 2015 and some of 2016-17). I also finished the first section of my write up for this new time period, and I hope to finish the rest in the next few days. I still have some loose ends that I will tie together when the time comes and I figure out how to do it, but for now I'll keep working on the bulk of my project--it feels like it's starting to come together.

Anyways, I hope you all have a great long weekend!

Pura vida,

Diego

Posted by [dsancho](#) at Jul 20, 2017.

What is good, fam!

My mentor, John, is out for the rest of the summer. Since someone needed to water his three office plants once a week I thought it was appropriate to set-up shop in his office overlooking the Salinas River harbor and bridge to make sure the plants were doing OK. We also realized that his computer would do a much better/faster job of processing the spectrograms and training the CNN than my computer in my cubicle.

I presented the passive acoustic monitoring sound system to the science educators in the EARTH conference that MBARI is holding this week. I was able to show them samples of biophony and anthrophony and they really liked it. Teachers are awesome. I also let them know what I have been working on and a bit about my background. I want to thank the interns who were able to stop by and check it out. I really appreciate your guys' feedback.

I am just about ready to start training the CNN. As I type, John's computer is running the program that is creating filtered spectrograms that represent the whale calls I collected from Raven. Danelle is helping me with setting up the CNN model while I am generating these images. We are using a CNN model called Inception that uses transfer-learning which piggy-backs on other successful algorithms and starts with defined kernel weights. It's quick and easy. Given how much time is left in the summer, this is the best option for us at this point.

Progress has been made and I hope to be training the CNN Monday.

Have a great 3 day weekend!

Daniel De Leon

Posted by [ddeleon](#) at Jul 20, 2017.

Week 6!

On Monday I fully wrapped up the Benchtop simulator, this involved writing up a user guide and on Tuesday I gave a small presentation to my mentor and Brent Jones, they're both interested in using the software. It makes me happy to know that I made something that MBARI will continue to use after the internship is finished. After the presentation I dove fully into project #2, the Inertial Current Profiler. I wrote a serial communication driver for the IMU using a protocol called SPI which I'm happy to finally get some experience doing. Communication protocols like SPI or I2C get used in almost every project that requires communication between embedded systems. Writing the driver was super educational and at times majorly frustrating. But today I finished it and what I'm working on now is a data logger that records all the sensor data on an SD card. There are some major limitations to what I can record if I want to get data quickly, right now it's looking like it'll be a file of straight binary code that I'll probably have to write some desktop software to parse into its relevant bytes before doing any data analysis on it.

Lots of whales visible from the beach today, spent some time out there watching.

Enjoy the long weekend

-Pierre

Posted by [pbaudin](#) at Jul 20, 2017.

Hey everyone!

Project is wrapping up (ish)! I have finally closed my data pipeline loop. Now, someone can extract a bunch of images from a new video, use a neural network to create annotation predictions, manually correct the annotations, and then train an even better neural network with the additional data. This approach should allow any researcher to iteratively make a better neural network to solve any object detection and classification problem. The two big bottlenecks are the initial annotations to create the first

neural network, and the manual corrections. The idea is that it takes less time to do corrections than annotations from scratch.

I also learned how to process videos at the video lab. I processed a video tape and will use it to gather metrics as to how well my neural networks is performing.

I've also started thinking about my presentation and how I'm going to introduce machine learning to a large and diverse audience.

Nathan

Posted by [nyee](#) at Jul 20, 2017.

Aloha!!!!

Wow I am so late for this post! I am so sorry. This week I finished my last interview at the Municipal wharf about the weekly water sampling. I also participated in the Earth teacher workshop, creating a lesson sort of based on the things that have inspired me this summer working with CeNCOOS. I was fortunate to work with two awesome teachers on creating this lesson and I think we put together something really good. I am also almost done with updating the algal blooms timeline which has taken me forever! Whew I am all over the place and in mid thought and have a million projects going on right now. I need to focus on wrapping everything up and working on my final paper. Oh ya, kayaking was awesome and it reminded me how much I miss kayak surfing. See you all on Monday!

Mahalo

Alia

Posted by [athompson](#) at Jul 20, 2017.

Hi Everyone!

Super late for this post so sorry! This week I was able to continue with my data analysis. I finished up testing a linear regression and started with logistic regressions. After a bit of trouble with trying to use Excel for it, I've decided to use R. Today was mainly about testing out R and running some scripts to see if this is the best method for answering one of my questions (the relation between type of fecal path and POC flux). I've also continued with gathering data in VARs. T-shirt orders are all collected as well so super excited about that!

Hope everyone has a great weekend!
Victoria

Posted by [vassad](#) at Jul 20, 2017.

Hi all!

Sorry this post is ridiculously late - it was a busy week! I've been continuing with daily sampling and analysis on my algae. I thought I was going to do more extensive photochemical analysis this week, but we decided to wait until next week to give the algae a bit more time to acclimate to the light levels. I did run the photochemical tests on the algae growing in the lowest light level on Thursday, and I'm excited to start looking at the data from that on Monday! Now that some of the algae are growing quickly I've been spending more time transferring them so they don't run out of nutrients in the media. After a few setbacks, we're finally running the carbon dioxide and nitrate experiment on the chemostats. This week we gave them 1000ppm CO2 and the algae have been acclimating. The results haven't seemed quite as exciting as we were hoping yet, but we're giving them more time to respond.

Hope everyone's having a great weekend!

Posted by [ehandler](#) at Jul 22, 2017.

20-June-2013

This page last changed on Apr 10, 2017 by [kgomes](#).

21-July-2011

This page last changed on Apr 10, 2017 by [kgomes](#).

21-July-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

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21-June-2012

This page last changed on Apr 10, 2017 by [kgomes](#).

How was your week?

22-July-2010

This page last changed on Apr 10, 2017 by [kgomes](#).

22-June-2017

This page last changed on Jun 07, 2017 by [mage](#).

feel free to post your updates whenever you can, but by Thursday at the latest
CLICK ON THE ADD COMMENT BELOW TO ADD YOUR UPDATE

Comments

Hi everyone,

This week was about MATLAB, Excel, and getting reading for the Western Flyer. I ran a 5-Gaussian MATLAB function for pure water at 10 and 20 degrees Celsius with pressures varying from 0-1500psi. After correcting for the baseline and choosing a high smoothing coefficient, it spits out a little box that has a bunch of useful information (amplitude, Raman shift, standard deviation, area and relative area) from the distribution. I diligently typed these into Excel and made some graphs from that and compared pressure to a bunch of different variables (Raman shift, speed of sound, relative peak area and hydrogen bond index). For the most part everything matched up pretty well to what we were expecting, but there was some funky stuff going on with the hydrogen bond index at 20 degrees C, but we'll worry about that later. The past two days have been getting the laser ready in its housing, moving it on the Western Flyer, and calibrating it. This afternoon I'm having lunch and taking a tour of the boat with my mentors, Alia, and Lizzie (she works for the Channel Islands National Marine Sanctuary). We leave tomorrow at 9:30 and I'm pumped to see the ROV in action!

Posted by [djumes](#) at Jun 21, 2017.

Hi everyone,

This week my mentor and I have been working together on writing a Matlab algorithm that'll automatically detect dial vertical migration patterns for day and night from the data set. So far, it seems to be working very well for the majority of the data. We had issues with the two datasets being on different depths which we adjusted by interpolation, but still need to adjust one of them for the time. Right now we're working on a function called peak finder that'll be used to find the min and max backscattering from surrounding data. besides that, I have also been working on REU timeline and Research planning guide assignments and having my mentor review them accordingly. Yesterday, I went out to sea with Steve Haddock and his team to deploy LAM and connect it on a MARS node with an ROV, which was pretty awesome!

Enjoy the rest of your week everyone!
Ash

Posted by [asanchez](#) at Jun 22, 2017.

Happy Thursday. I am happy to have my mentor back from travel, and we have been working on our respective machines to get set up with an integrated development environment (a place where we can write code and it will find errors and make it look nice) so that we can be on the same page. I have also been trying to work through some examples of data analysis, but (of course) I keep getting errors and having to troubleshoot. I got a crash course in using GitHub, and have successfully been able to edit a script and push the changes to the internet for all to see. I have found this process to be quite satisfying.

I'm still sort of in the process of getting situated and learning the basics. So far, it has been an interesting transition from being a scientist to being an engineer.

Posted by [rkahn](#) at Jun 22, 2017.

I spent most of the first half of the week obtaining around a total of 18,000 blue whale b calls. Hopefully this will be enough to train and test my CNN. The second half of the week I dedicated a lot to tuning the BLED to detect fin whale calls. It has been much more difficult to detect fins because their calls exist at the frequency where the hydrophone picks up a noise band (we don't know where that noise comes from). I found myself falling into a rabbit hole trying to use adaptive filters to exclude that background noise and tune the BLED (my mentor got me out eventually). I have been reading more literature for the for my project as well. The REU requires us to summarize a few papers and answer some questions about our project to help get us prepared for the paper and presentation. I hope by the end of today I can have at least 5,000 fin calls which should be enough to get me started with the machine learning for next week.

Posted by [ddeleon](#) at Jun 22, 2017.

Morning!

This week has been an assortment of lab tasks for a couple different projects I'm working on. I've also continued to try and understand all the bioluminescence mechanisms, and what is happening when I run different assays. It feels like every time I learn something new I have to kind of reframe everything else in my brain so that it all makes sense again. I've run basic bioluminescence assays on our mystery mollusc and pannychia (sea cucumber with some WILD biolum patterns); testing for the presence of different photoproteins or luciferins (light producing molecules). We run different inhibition assays to try and identify the compounds in these organism's bioluminescence, because the assay that effectively inhibits light production will tell us something about the compounds involved. All of these reactions are done in the dark, so there is no extra light throwing our results off. I've gotten really good at pipetting and such without any light. Unfortunately, we don't have any positive results yet, so we're gonna try some new stuff.

The other project I'm sudo-working on is the sequencing/cloning of the vampire squid luciferin. I've never done extensive genetic work, so this is exciting and intimidating at the same time, but we'll see how that goes!

Happy weekend!

Posted by [cweinstock](#) at Jun 22, 2017.

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Happy weekend!

Posted by [cweinstock](#) at Jun 22, 2017.

Hello! I have officially changed up my thesis 3 times this week, but hey that's still progress... I decided to just focus on larvae as opposed to all the life stages of groundfish that have pelagic larvae. Looking into all of the life stages proved to be extremely difficult. I want to focus on Macruids for now, but will eventually end up looking at all of the species that are available within the CalCOFI datasets. Yesterday I spent most of the day downloading the 60 datasets available on the CalCOFI website, which took a long time because the datasets were so large. I will start doing data analysis today on the datasets, looking for any interesting patterns and comparing them to climate indices. Stay tuned! Hopefully I won't have to change my thesis again. I am excited to see what comes out of this project! Hope everyone is having a great week.

Posted by [dfabian](#) at Jun 22, 2017.

Hi Everyone!

This week started with heading out on the Rachel Carson with Chad Waluk & Kelly Benoit-Bird. The goal of the cruise was to capture simultaneous acoustic and camera data from the ROV. Luckily I got to see some of the images (along with Emma) while it was live! The points I got to see were at depths of 150 m

and 220 m. A few squid happened to be captured on camera and the entirety of it was really interesting! We also saw a ton of whales that day! The rest of the week has been collecting data through VARS and working on a few assignments from the REU. We had to create a Research Planning guide (which included summarizing articles - luckily I had already read a few!) and a project timeline with our mentors. Last week I finished a draft of my introduction and I went over it with my mentor on Tuesday and we decided I'd get started on drafting up my methods and hopefully have an outline by Monday morning and begin analyzing whatever data I have so far to see if that's the direction I would like to go in. That's about it for this week!

Have an awesome weekend everyone!

Posted by [vassad](#) at Jun 22, 2017.

Hey everyone!

This week has been a pretty busy one! On Monday (with Victoria) and Tuesday (with Beverly) I went out with Kelly Benoit-Bird and Chad Waluk on the Carson. It was a really fun experience, especially Monday! It was very sunny (almost warm) and we saw A LOT of whales and some dolphins. Got to watch them use the ROV to do live imaging and it was pretty fun-- I saw a lot of squid and krill. On Tuesday, it was much colder and foggy, so we stayed inside most of the day. Unfortunately, I definitely get sea sick when I'm inside so not much work was done that day. I got some good sleep in though, and did have a chance to watch the screen from the common room, although going into the ROV room felt like a not so great idea. Yesterday I met up with Nancy and worked more on my different projects: Tom O'Reilly's autonomous tech, the blog, Benoit-Bird's web profile, and starting some brainstorming for my bigger project rewriting the ESP page for Jim Birch. Lots of stuff is almost done and then I'll be ready to really sink my teeth into the ESP project. Be sure to check out the blog too, which is going "live" Monday or Tuesday, hopefully!!

See you Monday,
Emma

Posted by [ebueren](#) at Jun 22, 2017.

Hi all!

This week has been pretty busy! On Sunday I came to MBARI with my mentor at 4:45am for the first of a series of 24 hour, high resolution sampling. We are sampling from the Chemostats at 5am, 9am, noon, 3pm, 7pm, 9pm, midnight, 3am, and 5am to look at the diel cycle of the algae. The other days I continued with daily sampling and working on finding the trends in our data. I've spent most afternoons reading papers and working on learning how to use R to analyze the data. On Monday we switched the light regime, so today we're doing another round of high resolution sampling to compare how the algae respond. Unfortunately, one of the four Chemostats had to be restarted and the cooling system stopped working for a few hours so those algae aren't very happy now. I'm also working on some photochemical analyses of the samples today. By this time next week "Phase 1" of the Chemostat experiment will hopefully be complete! Hope everyone has a good weekend!

Posted by [ehandler](#) at Jun 22, 2017.

These are some of the things I've been working on this week!

Tensorflow

- Learned how to use a Tensorflow implementation of Faster R-CNN (Region Convolutional Neural Networks) on standardized datasets
- Made basic visualizer for model predictions
- Started learning how to use Tensorboard
- Realized that entire implementation is basically useless for our purposes and the codebase is basically useless. Scrapped the entire thing 🙄

Keras

- Found, started using, and modified a Keras implementation of Faster R-CNN to work with our data.
- Made more scripts to process and visualize data (such as processing interlaced video)
- Made a very small hand annotated dataset to test the Keras implementation

- Got first Faster R-CNN predictions 😊

Random things

- Learned about basic web hosting with apache servers
- Annotated video data to improve our original image classifier

Nathan

Posted by [nyee](#) at Jun 22, 2017.

Hi everyone,

So I'm finally starting my internship, super excited to be here. For the purposes of this confluence, I have to say I've had a total effective time of ~3 days at work, so this will be short. After doing some paperwork (talking to HR, getting my SSN, safety orientation), I started working on the OA2 (located in Ano Nuevo) time-series in MATLAB, and these are the things I have accomplished:

- Clean data (reduce time period to when data is available for all variables, delete NaNs).
- EOF Principal Component Analysis for winds and plots to explore how winds drive other variables.
- Cross-covariance analysis between winds and all other variables (pH, pCO₂, Temp, Salinity, O₂, Fluor), as well as between some of the variables to investigate how they relate statistically.

I think this is what my project is going to be, but my mentor has been away this week so I have to confirm with him later today.

Enjoy your long weekend,
Diego

Posted by [dsancho](#) at Jun 22, 2017.

Week 3

After measuring the max current of the SeaStar at 3 A and min current at 500 μ A, we are moving on from the SeaStar II model. Ideally, the goal is 10 μ A. As a side project and mini-learning experience, I have been tinkering with SeaStar's sleep protocol to try to enable/disable when SeaStar is idle.

Now instead of the Pro Mini as the Arduino, we are using the Feather M0 to try to gain more peripheral availability through pin muxing. A good factor of applying all the equipment integrated is reading the datasheets first. I have been reading the DS3234 datasheet for the sleep protocol and Feather M0 specs. and assembly for the continuation of the project.

I also learned more soldering applications. I can now apply hooked and straight attachments on header pins. I also learned how to solder resistors, small chips (op-amps?) and even smaller capacitors onto a circuit board!

Lastly, I rode on the Rachel Carson and spent most of my time sleeping to avoid nausea. I think ROVs are the coolest, but my experience has taught me that the remote operation should be done even more remotely. Some day, I would want to be able to control an ROV without being on a ship! I think this shows that there is room for innovation towards communication across the ocean.

Posted by [babadines](#) at Jun 22, 2017.

Hi All,

Coming to the end of my second week on this project. Last week I said I felt good about the prospect of finishing the Benchtop Depth Simulator by the end of this week. That turned out to be an accurate prediction, I have a full working system that accurately feeds the CPF pressure based on the fluid displaced by the motor and the speed it is trying to achieve. My mentor then tasked me with changing the simulator to have a pressure response calculated from a dynamic model of the system to estimate the change in force based only on fluid displaced by the buoyancy engine. This is seen as an effective way to test the accuracy of our dynamic model. Initially, results from the model were very far off from where the real world data said they should be. So I set up a parameter estimation problem in Simulink to see

what we could adjust to make our model results better approximate the real world values. Here I hit a roadblock, the Simulink tool I wanted to use was not licensed by MBARI. I spoke with my mentor about it and he may just buy a license for it. In the meantime I just manually tweaked the model to see how we could change the results. After some analysis, I found a way to introduce a corrective term that so far seems to vastly improve the model.

So the Benchtop Simulator is now essentially done, there are some finishing touches but for now I am moving on. The next project I will be working on is to try and use an acceleration sensor to detect underwater currents hitting the float. Lots to be done here with signal conditioning and hardware interfacing that I'm certain will be a great challenge.

Looking forward to our MBA tour on Monday

-Pierre

Posted by [pbaudin](#) at Jun 22, 2017.

Aloha everyone, sorry this post is late with all the excitement going on the Western Flyer I totally forgot! This week was great. On Monday I had a meeting with Mary Miller at the San Francisco Exploratorium where I viewed the exhibits that related to plankton and ocean habitats. It was interesting to speak with her about how to design educational resources that are informal and for an older age group than what I am use to. On Tuesday I was able to attend the MBARI EARTH spin off workshop about climate change. I really liked this workshop and the speakers I thought did a great job conveying why it is important to study climate change from a Pacific Islander point of view. On Wednesday, my mentor and I spoke again about what my project might be and I sent out more emails to get information and help with the HABs resources that are already on the CeNCOOS website. Of course today I am on the Western Flyer and will be shooting video to do a mini doc about ground truthing and why it is important in science. Hope you all have a great week/weekend and see you when we return on Tuesday!

Mahalo

Alia

Posted by [athompson](#) at Jun 22, 2017.

A week of milestones

So in this week of milestones, I forgot my weekly update...

In the world of research, my project is progressing pretty well. I've run all of my PCR and next week will start to clean samples for sequencing. We're also going out on the Carson on Tuesday and are hoping to collect some more pteropods- I'm staying away from Dramamine naturals this time 😊

This week, I spent most of my time at the Stevenson School in Pebble Beach. I sat in on the EARTH workshop and learned a lot! This workshop was focused on culturally appropriate lesson plans about climate change for students in the Pacific Islands. There were speakers from American Samoa, the Marshall Islands, and a scientist from Stanford University. Most of the attendees were affiliated with World Teach- a program where people volunteer to teach in remote areas, like the Pacific Islands.

Now for some non-MBARI related things that were exciting this week- I celebrated my 5 year wedding anniversary and closed on my new house! (Both on Thursday-hence the forgetting my update).

Posted by [mbassett](#) at Jun 24, 2017.

23-July-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

Much calmer and more productive week than the last. I started writing the paper and learning QIIME. Met with Mary Silver and Kim FB to explore new avenues for job hunting. I also met with Andy Moore at UCSC for his wise words on Matlab and physical oceanography. Still need to finish counting those QP samples!

23-June-2011

This page last changed on Apr 10, 2017 by [kgomes](#).

23-June-2016

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24-July-2014

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25-July-2013

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25-June-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

26-July-2012

This page last changed on Apr 10, 2017 by [kgomes](#).

I've spent most of this week out of the office. Since the aluminum plate arrived from Lusk on Tuesday, I've spent most of my time in the machine shop, laying out hole locations, drilling holes, and deburring edges. The 12 fill in plates are done, and now I'm working on the submerged plate itself. That is proving to be much tougher than I originally anticipated. I'm planning on spending the rest of today using a portable electromagnetic drill press to get through the A36 steel that a standard hand drill just can't handle. If all goes according to plan, the plate will be ready for testing in the test tank by the end of next week. Remaining tasks to complete before testing include: creating a new bridle for the plate (since our last one snapped), moving all the testing equipment (HPU, accumulator, manifold, valve, and hydraulic ram) to the test tank room, making a new mounting bracket for the string pot so we can measure the linear position of the hydraulic ram, and creating some bumpers for the corners of the submerged plate to protect the inner wall of the test tank.

26-June-2014

This page last changed on Apr 10, 2017 by [kgomes](#).

Last week's update, which I somehow deleted:

At work on Monday, I realized I wasn't getting lost in the building as frequently, and that I'd identified some favorite tea selections: sure signs of feeling more at home here! I'm excited to get going this week. My mentor and I refined my personal project (standardizing image analysis algorithms for the Sedimentation Event Sensor), and I learned some C over the weekend, so I can't wait to start coding. I'm looking forward to helping Rich work on the rovers later, which have to be ready for their deployment next week!

This week's update:

Yesterday, Jen, Jon, Ben, and I accompanied the benthic rover team on the Rachel Carson. I had only ever been seasick once before; I lasted four hours until I had to lie down and sleep through the rest of the trip. I did get to see a some whales and Risso's dolphins (Jon was jumping up and down with excitement). Fortunately, I lasted just long enough to see the rover sink underneath the surface, followed by the ROV. All in all, a very exciting day and every bit worth the queasiness that accompanied it.

27-July-2017

This page last changed on Jun 07, 2017 by [mage](#).

feel free to post your updates whenever you can, but by Thursday at the latest
CLICK ON THE ADD COMMENT BELOW TO ADD YOUR UPDATE

Comments

Happy Thursday. Great job with the move today, everyone! And the BBQ yesterday - go team!

As of now, I have a script that can be used to identify data point clusters in oceanographic data, save the cluster labels back to the database where the data is stored, and remove the labels. I can also do all of those things sequentially by stepping through the data and identifying clusters in each step. I hope that sort of makes sense...

Anyway, I've reached a good break point to start working on my final paper and presentation.

I've also been making some changes to my set-up so that my software will run more quickly on my local server. This is been a process but I think I might be in good shape now. Just waiting for a big database to load. Cross your fingers.

I think that is all. Work has been a bit slow this week because of everything going on.

Have a lovely weekend, see you all at the Open House.

Cheers,
Rachel

Posted by [rkahn](#) at Jul 27, 2017.

Hey guys!

Crazy week. Great job on the BBQ! Due to everything going on this week, I haven't had much time to work on VARS stuff, so I am still trying to get through pulse 66 but I should be finished with it by the end of this week. After that I will start on the cross correlation data analysis. Hopefully I will get everything done just in time for the presentations! Hope everyone is having a great week and enjoying the new housing.

- Danielle Fabian

Posted by [dfabian](#) at Jul 27, 2017.

Aloha e,

Hi everyone! Awesome BBQ yesterday. Many people complimented the food and how we all worked together nicely. I really can't believe we have two and half weeks left. I am finalizing my design things and trying to get everything finished up. I am still waiting for video from Clarissa in San Diego to finish my video projects. I can't wait to do the tour of NASA, how cool is that gonna be!!!! The move went well too I think. I don't have much to report, except I am on track but still need to work hard and pull it all together. Looking forward to seeing the results of everyone's projects but sad the summer is winding down.

Mahalo
Alia

Posted by [athompson](#) at Jul 27, 2017.

Land sickness is no joke...

As if suffering from sea sickness wasn't enough... The Flyer cruise was AMAZING! I learned so much and got to participate on a bunch of different projects while at sea. What I didn't do a lot of was work on my project. I had grand aspirations of writing up my paper, but the meds I was on dilated my pupils, which made focusing on a computer screen a bit difficult. We did see a bunch of *Procymbulia* sp. and even some with some mucous feeding webs! There aren't many annotations of the webs because they usually ditch them when the ROV shows up. We were able to sneak up on a couple and take some frame grabs before the webs disappeared. They will help out with the line drawings! Now, back to writing 🤔

Posted by [mbassett](#) at Jul 27, 2017.

Hey everyone,

It was a fun week this week with the birthday cake break, quick COSMOS discussion and BBQ prepping/cooking. As far as my project goes, I finished collecting all my salt water data. This means I won't be using the Raman laser anymore (it's such a shame because I was finally starting to get the hang of working in the dark). Running the MATLAB baseline corrections and Gaussian fits is also complete for salt water, so now I'll just be sifting through some papers about temp/pressure/salinity and their effects on various chemical properties to get ready for the paper and presentation. I'm also looking forward to the Open House this weekend with all the different activities and stoked to see the inflatable vampire squid.

Cheers,

David

Posted by [djumes](#) at Jul 27, 2017.

Hi everyone,

Crazy busy week, but a good one nonetheless. I finished the latest version of my write up which includes two different time periods in which I compare the three moorings I'm working on at different times of the year. I had some troubleshooting to do, and some plots from early on I had to fix to include more data, but it came out pretty well and the seasonality within Monterey Bay, and its interaction with upwelling, that was present was really interesting.

While I'm sure I'll keep coming back to these analyses I've been doing and refining them, I am now starting a new part of my project. I will be focusing on pCO₂ in air at each mooring, particularly because from my analyses it was clear that during periods of relaxation or purely South winds pCO₂ in air at Hopkins, and to a lesser extent M1 and OA2, increases. The idea is to see whether this has any net effect on the local scale air-sea fluxes, which is interesting and hasn't been studied before although it has been known for many years. Thankfully I still have 4 weeks to go, so I'll let you know how this new endeavor goes in the next update.

Have a great weekend,

Diego

Posted by [dsancho](#) at Jul 27, 2017.

Greetings!

This week has been weird with everything going on and the end of the project looming. I started by sequencing the last of our PCR gel cut products, to make sure that I had a nice, clean transcript that I can clone in bacteria and express later. I designed some cloning primers on Monday, which is a lot more complicated than making amplification primers because you need restriction sites, extra bits to make sure the replication enzymes can bind properly, and it needs to start and stop exactly on your start and stop codons, so you're not cloning extra genetic material. That's why we needed such good sequence, so we could be sure we knew where our open reading frame for our potential protein was.

The primers got here today, so I'm setting up another PCR with my new cloning primers, and will be digesting and purifying both my DNA and my cloning vector later today. The next steps are to transform my fragment into the vector, then into my E. coli, grow up the bacteria, select colonies, purify/sequence (to make sure we actually cloned the vector sequence), and then transform the vector into a different strain of E. coli that will hopefully express my protein!

If everything goes PERFECTLY, I'll have an expressed and confirmed luciferase protein from vampire squid a day or two before the presentation. Wish me luck!

Happy weekend everyone,

Chloe

Posted by [cweinstock](#) at Jul 27, 2017.

This week I finished a data logging system that read from 2 sensor devices to get linear and angular acceleration along with compass heading from a magnetic field sensor. So what I have is a mobile system that can be mounted on something and records this data onto an SD card. The data recorded on the SD card can then be processed on a desktop, this is not the most ideal set up for the eventual goal of automating CPF drift correction but it is a solid basis for determining the feasibility of such a system. Now the hardware is working and the sensor drivers are written, I've started processing some output data in MATLAB to try and determine whether or not I'll be able to measure the types of accelerations we should see on the CPF. The likely answer is that we won't with the sensor being used right now, however the sensor was chosen specifically because there is another (much more expensive) sensor made by the same manufacturer and using the same programming interface that should be able to do it. The same software I wrote for the current sensor should run on the fancier one without any serious modification required.

The hardware programming was fun and challenging, I'm a little less excited about the data processing considering my pessimistic expectations of the performance of this sensor but time will tell.

-Pierre

Posted by [pbaudin](#) at Jul 27, 2017.

Hello!

I have had a very successful week. There has been a bit of frustration with library dependencies for the last of the code but we were finally able to run the Inception v3 model and got some really great results. We got 100% accuracy on the blue whale true-positives from the network but only a 20% accuracy for the false positives. I am re-annotating all of the spectrograms and praying to the computer science gods that re-annotating misclassifications will make the network happy. I've been trying to get started on the report and presentation but I feel like I can't start that until I get some results that we are happy with.

BBQ was awesome. You guys killed it. I'll be enjoying leftovers for a good minute.

Have a great weekend and don't forget the open house!

Daniel

Posted by [ddeleon](#) at Jul 27, 2017.

Happy Thursday!

Great BBQ yesterday team! there were lots of happy well-fed MBARIans 😊, yay! this week's been very busy, as this internship comes to an end. I spent the majority of my time obtaining data outputs and writing a code to be able to compare backscatter concentration to certain parameters. I've been able to independently work on my code this week, a great accomplishment..keeping my fingers crossed that everything goes well the rest of the week, I will begin analyzing and interpreting data next week, and begin writing my research paper.

As for the REU, we have an oral communication workshop Friday (tomorrow) and a mid-summer reflection writeup.

hope you all have a great weekend!

Ash

Posted by [asanchez](#) at Jul 27, 2017.

Hey Everyone!

Bit of crazy week with the cake break and the barbecue! I finally figured out how to work with R on my logistic regression and how to interpret it so that's exciting! And I've spent the rest of the week working in VARs and getting as much possible data before I have to analyze everything. The barbecue was absolutely insane but I had a ton of fun working with everyone! Thanks so much to David who went along with Danielle and I to buy everything (3 stores later and getting home at 9:00 pm but I had a blast!) It

seems like it turned out great so I'm super happy about that 😊. Spent the rest of today not in VARs at the Land Use Watch Panel which was once again a lot of fun. That's about it - I can't believe we only have two weeks left!

Have a great weekend everyone!

Victoria

Posted by [vassad](#) at Jul 27, 2017.

Oops, late confluence!

Had a rough week of some procrastination as the big deadline is coming up, but I'm back on track now! Some writing is done for ESP, I have edited the BTS news articles and sent them out to Benoit-Bird to review, although I haven't heard from her yet. I'm going to pop by her office if she doesn't reply to my emails by today just to make sure everything is okay.

Remember to send in a guess for the mystery picture! <http://www.mbari.org/animal-plant-mineral-or-man-made-5/>

Looking forward to open house!

Emma

Posted by [ebueren](#) at Jul 28, 2017.

This week processed two new videos from the video lab. This will give me more data to test and train my algorithms on. I also decided to go back through my annotations and add a few animals. My networks were getting confused with some similar looking animals such as the Tjalfiella, Oneirophanta mutabilis complex, Fungiacyathus marenzelleri, Cystechinus loveni, and the Synallactidae gen. et sp. Indet. I'm hoping that annotating these animals will allow my network to better detect and classify the animals I really care about as I will remove these in post-processing. I am also able to make pretty results graphs that compare the number of training images to the average precision for each animal. Also grilled ~200 hamburgers.

Posted by [nyee](#) at Jul 28, 2017.

Week 8:

Yesterday, I had to stay a bit later after work to collaborate with one of my adopted mentors, Danelle, and see what kind of hardware connections were needed for communication between SeeStar (Sleepy Pi) and Feather. Should it be TTL to RS232 to RS232 to TTL or straight from TTL to TTL between the boards? I ended up recreating my current set up for Danelle, which meant soldering header pins onto the Feather, wiring pins, and of course polishing and uploading the code. There was a lot of debugging via code and wirings, but we discovered that somewhere along the connection between SeeStar and Feather, the Feather fritz-ed, and was no longer sending the proper bytes, but instead garbage.

We tried out my current Feather set up with a simple test, which writes the character 'U' and it worked just fine. Next week we will finally test the protocol I wrote and see how SeeStar can receive and send information with the Feather.

As for the software side, the Feather reads two basic opcodes, \$1TSYYMMDDHHMMSS and \$1TL. The first one, (Take Sample) orders the Feather to read samples from all its sensors and log the information onto a file with the Year, Month, Day, Hour, Minute, and Seconds as its timestamp. This means that the time is relevant to the SeeStar even though the Feather has its own clock. The second (Take Log) means to send back the last information recorded onto the file back to SeeStar and can be used to check if reading and writing commands are functioning.

It was a lot more effort trying to integrate previous work with my own. Even though my present code works, it is messy and inefficient, whereas the code I wrote on my own was naturally much cleaner and coherent. Although the work I put into it does not reflect the quality of the product, I am glad that I went through the experience of learning someone else's protocols, understanding their flow of logic, and trying to meld together ideas to fit past accomplishments with current needs. This type of collaboration is common for software engineers, so it was beneficial for me to reflect how well I do.

Working with other engineers has also given me firsthand experience on projects. I have noticed and have even heard other engineers admit how much their ideas differ, despite designing the same product. As we collaborate as a team, we do not essentially feed each other affirmation of our ideas, but rather clarify problems at hand and question which of our methods answer them the most.

Another thing I have enjoyed here is seeing how much experienced engineers still go through similar troubleshooting difficulties as someone at my level. I often worry that as I progress academically and professionally that I should not be making or encountering "trivial" difficulties, such as establishing serial connections or incorporating libraries. It is nice to know that despite years of experience, people still make mistakes.

Besides polishing up my code and testing the protocol with the SeeStar, there really is not much more work to include. I felt pressured to write a complete, clean protocol and share a final product for the SeeStar during the test yesterday, but Dannelle admitted that prototypes are often messy, which alleviated a lot of my stress. I can possibly add a check sum function, which adds the bytes of all the characters sent and compares it to the last byte for the purpose of data integrity. I think it is similar to parity bits, but in this case bytes are summed not just bits.

My priority for the rest of this week and next is the presentation and paper as I will be having a mock presentation next week in front of the SeeStar group!

Posted by [babadines](#) at Jul 28, 2017.

delete

Posted by [babadines](#) at Jul 28, 2017.

Hi everyone!

What a busy week! Cookies were baked, tons of boxes packed, and air mattresses blown up!

I've had a fairly hectic week at the lab as well. When I came in on Monday, my mentor told me that we'd run out of sheath fluid for the flow cytometer over the weekend, so we didn't have any data on growth rates, size, or fluorescence from Saturday-Tuesday. We preserved samples to run when the sheath came in, but on Tuesday we had issues running them on the cytometer. We decided to save them until we were certain we didn't need to use the cytometer for an ongoing project. From Tuesday onwards, we've been working on wrapping up the growth-curve experiment. I've spent a lot of time running photochemistry tests, and today started working with my mentor to analyze all the data we've been collecting. We're continuing to run the CO2 and nitrate experiment in the chemostats.

I'm giving a practice talk to my lab at our lab meeting on Wednesday, so I'll spend most of the time before then working on getting that solid.

Hope everyone has a good weekend!

Posted by [ehandler](#) at Jul 28, 2017.

27-June-2013

This page last changed on Apr 10, 2017 by [kgomes](#).

28-July-2011

This page last changed on Apr 10, 2017 by [kgomes](#).

Wow.. Week 7 is upon us! Linda and George are taking off, but please do post your update as we hope to be able to check in from afar. There will not be an intern meeting on Monday Aug 1. George will be back on Weds sometime - not sure when I'll get into work. Have a good week.

28-July-2015

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28-June-2012

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test

29-July-2010

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05-August-2010

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12-August-2010

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29-June-2017

This page last changed on Jun 07, 2017 by [mage](#).

feel free to post your updates whenever you can, but by Thursday at the latest
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Comments

Hi everyone,

Well this week was a bit of a letdown, starting with our *Western Flyer* trip being cancelled mid-travel after spending 1/5 nights at sea. It wasn't a complete fiasco since I saw my first wild whales, ate some great food, and controlled the ROV's arm, but I mostly feel bad for my mentor Dr. Peter Brewer since that was his last *Western Flyer* expedition.

I thought this trip would provide some data that I would be able to talk about for my project, but alas we had to make some adjustments. I'll be working with a desktop Raman spectrometer and shooting a laser at sea water inside a pressure cell. This will measure the effects of salinity, temperature and pressure on the hydrogen bonding index and velocity of sound. I thought it sounded cool, but not extremely relevant to 'the bigger picture' initially, but my mentor told me that this work is extremely important for the NAVY to find out how deep submarines have to travel to be undetected by the enemy (but not too deep), but still able to communicate. I'll be collecting a ton of different data to map somewhat of a 'ocean temp/depth' profile while most likely keeping salinity constant.

Other than that, the aquarium VIP tour was awesome (watching the 'vegetarian' sea turtle eat the fish and seeing the sheer size of the tuna were highlights) and trivia was quite a success (shout-out to Rachel for the closest guess to the number of goats in the Netherlands; that was gnarly).

-David

Posted by [djumes](#) at Jun 28, 2017.

Aloha everyone,

This week was interesting. I feel I took two steps back, three to the side, five forward and one in the air. I made some progress on getting interviews scheduled for HABs water sampling, SPATT and mussel sampling at the Santa Cruz Wharf as well as water sampling at the Monterey Wharf. I got the green light to change any of the educational resources on the CeNCOOS website and my mentor and I discussed re-organizing the layout of any and all HABs resources. I got to spend 2 hours speaking with Dr. Brewer who is most interesting, helpful and experienced. No question I asked could stump him. I was there when David saw his first whale in the wild, it was a pretty exciting moment and I shared with him the first time I saw a whale in the wild. I was really lucky to get to know the Brewer lab even though we only did a short day trip out to sea. I would love to come back! I also got to speak with Ed Peltzer, who was also very interesting and helpful. I have a ton of work to do as I am sure you all do. So good luck and eyes on the prize!!!

Alia

Posted by [athompson](#) at Jun 28, 2017.

And I'm off to the races!

Last Thursday I talked to Larry Bird about Dr. Benoit-Bird's hydrophone and worked on getting the blog live. Yay!

Monday was EXCELLENT. I had so much fun, and I had no idea how rad tunas are until I saw them. Nature is wild. Is it too late to change my career path to become a tuna aquarist, ha? Highlight of that trip was the tuna and the hammerhead shark. They're so cool and graceful. Afterwards, I wrote a blog post about the MBA tour (which is online now) and features some great pictures of everyone, plus a video of the tuna thrashing (S/O to Alia for editing that video). I'm really happy with it, although I'm not sure I'm totally settled on the style/tone of the writing. Too "cutesy" maybe? I've never written in a more conversational style for a blog before, so I'm still shaking out the style.

Profiles are starting to go up! Thanks to everyone who's sent one in so far and nice boat names. Send them to your parents/relatives.

Tuesday I met with Dr. Benoit-Bird to talk about her acoustic research as well as sat in on Dr. Birch's lab meeting for the ESP. Both projects are making progress, and I have a good outline of Dr. Benoit-Bird's webpage. This Wednesday I spent the day making a skeleton template of Dr. Birch's webpage for the ESP. Now that that's done, I'm going to start filling in information. In other words: I did all the fun stuff (ha) for these projects, and now it's time to actually write Dr. Benoit-Bird and Dr. Birch's webpages.

Meanwhile, the mobile cytometer and the wave glider hot spot pages have been updated. There's still a few more edits to make from Tom O'Reilly, but it's nearly finished!

Finally, the stray black cat by Phil's has accepted my friendship. I have named him KitKat and he is very soft.

Posted by [ebueren](#) at Jun 28, 2017.

Hi everyone!

So this week was a bit of a stressful one, but we're nearly to the end! Monday was amazing and I had a blast at the Aquarium with everyone. I have to say the jellies were probably the highlight of that for me. It absolutely love moon jellies, and having them in the touch tank was so much fun, especially watching everyone's reaction! The tuna were crazy interesting and getting to see the Mola in one of the tanks was so amazing! Trivia night with the majority of you on Tuesday was a lot of fun - and it was cool that some of y'all finally got to meet some of the other REU interns

In terms of the actual work I've been doing this week, the majority of the week has been spent working on VARS and collecting my enteropneust data. I've gone through a few "Pulse" trips so far, which are the trips the tripod have taken down, and have found quite a few enteropneust in each trip. As of right now, I'm measuring the distance of the fecal path traveled, the area of the enteropneust body, and annotating each one. One small issue is that I'm only able to measure the enteropneusts on the bottom half of the screen, as otherwise it's a bit too unclear/small to view, and since VARS doesn't have zoom capabilities there's not much I can do about it. But that's alright, I'll just be sure to mention it in my methods later on!

When not working on VARS this week, I was working on a project proposal for the REU. By the end of this week we've got to have a written proposal (by Friday evening) and an actual presentation for Friday morning! This includes an abstract, introduction, methods, anticipated results, and the broader impacts of the project. I've pretty much gotten my written proposal done with and today I'm finishing up the presentation. I was able to present what I had yesterday in a practice with fellow REU interns last night and got some great feedback from one of our coordinator's!

Later today I'll be on the panel for the WATCH Land Use Scenario and I'm super excited about that. But that's been my week! Hope everyone else's has been great and have an awesome weekend everyone!

P.S. @EmmaBueren any chance you can help me gain that cat's friendship as well?

Posted by [vassad](#) at Jun 29, 2017.

Goodmorning!

This week has been really fun, starting with the visit to the aquarium and potentially ending with some progress on my new project. I ended last week with a kind of dead end on my mystery mollusc and pannychia, but I did get to poke a sea anemone and watch it light up. A couple minutes later Steve told me that I'm one of like 5 people in the world that's seen that in real life, which is kinda cool. I also poked a nudibranch (tritonia), and I'm ~90% sure I saw that one light up to, which would be extra cool because we weren't expecting that one to bioluminesce. So the slug is hanging out in our lab fridge until we decide what to do with it.

On Monday I got to start on the vampy project. I'll be making some cDNA from a transcriptome, amplifying it, and cloning it into a vector to confirm this gene as the one that expresses the luciferin in *Vampyroteuthis*. I started that process by finding some sequences in a database, aligning them, and comparing them to mass spec sequences from the person who started this project. This was all really new for me, because it requires using the terminal and R command line, which I've never done before. So it's taken a while to get going, but it is going. Today I'll be finding the gDNA for the transcriptomes that I was talking about, and then creating primers for them in geneious.

I would also like to take a moment of silence for our fallen comrade, the vamp that we caught on our cruise. This lil nugget survived longer than we all thought possible in the darkroom of the aquarium. He passed yesterday, and I picked him up from the aquarium this morning. So if anyone wants to come pay

their respects (and see what a teeny vampire squid looks like in etoh) you're more than welcome to come pop by my cubicle today. R.I.P. Oh and I'll be dissecting him at some point to try and get some DNA/RNA to get a more accurate transcriptome sequenced.

My octopus kiss hickies are slowly fading, and I'm sad to see them go.

Cheers friends,

Chloe

Posted by [cweinstock](#) at Jun 29, 2017.

Hello everyone!

So things still aren't going as planned for my thesis... Last week I had decided to stick with just pelagic larvae for groundfish species and spent a few days collecting all of the available data. I was excited because there was a ton of data and I thought it was all going pretty smoothly. However, Monday I came across a fisheries report that stated that a large portion of the data collected from SWFSC was collected poorly and should not be used in analyses. Unfortunately 3/4 of the data I obtained was from the SWFSC time series survey, meaning the majority of my data was likely unusable. I emailed the man in charge of the surveys two days ago and I am still waiting to hear back from him as to whether I need to throw out all the data or if I can still make it work. Unfortunately, there are not very many long-term time series surveys out there that have the kind of data that I need for my particular research project... so I may end up having to completely change my thesis again depending on what the SWFSC person says. While I have been in limbo for the past two days I decided to reteach myself R. After speaking with some of the staff, I realized that most of the datasets that I will be working with throughout my thesis research are going to be way too large for Excel and that I was better off using RStudio for data analysis. I haven't used RStudio in a really long time so spending the last two days refamiliarizing myself with the program was necessary and will be useful in the future when I start working with large datasets. On a final note, I had a great time on the behind the scenes tour at the aquarium on Monday! I worked at the gift shop there a few years back and have been on the behind the scenes tour before, but I still saw/learned new things and had just as much fun! That place will never cease to amaze me.

Cheers! 😊

- Danielle Fabian

Posted by [dfabian](#) at Jun 29, 2017.

Week 4:

I met Dannelle, an engineer/scientist who worked on SeeStar. She is recognized as the Raspberry Pi and Deep Learning expert among many other specialties. She clarified an overview of the SeeStar system and explained how my project contributes to the system as a whole. She is working on the Sleepy Pi to serve as the master, which will coordinate when the Feather M0 (slave) should sleep in order to conserve energy. I am working on the Feather M0, which then controls when to activate and deactivate peripherals (camera, light, temperature module).

The important factor here is to establish the protocol between the Sleepy Pi and Feather M0 and ensure that the Pi communicates for the Feather M0 to sleep only if it is not in the middle of retrieving sensor data. After testing and running a previous protocol designed by a past student on the Arduino ATMEGA 2560 I gained a bigger sense of how the protocol should work. I am in the process of adapting a similar protocol onto the Feather M0, but the translation from the ATMEGA to Feather is a little tricky because the Feather allows a specialization of serials, SPI, and I2C and requires pin muxing. Furthermore, this involves different libraries with different functions.

Additionally, Thom taught me to break down problems into smaller tasks. Instead of focusing on the communication between Pi to Arduino, he instructed that I focus on the Arduino. He also taught me how to use the oscilloscope to verify if signals were indeed being sent and received to discern where there were breaks in communication. I also made my own lil' UART serial.

Lastly, I've been working with Paul, Rachel, and Pierre in preparation for the DIY-ROV for the Open House. We stripped and crimped so many wires.

Posted by [babadines](#) at Jun 29, 2017.

Hello!

This week sort of flew by... Had a lovely time at the Aquarium on Monday. I've been helping Paul Coenen with the BYO ROV stuff - so far it has involved drilling, cutting wire, stripping wire (using the super fancy automatic stripper, what a luxury!!), and crimping wire. The soldering and wiring are next. I've really enjoyed getting to know some of the electrical engineers, and it has been nice to have breaks from my computer.

Speaking of my computer, I've spent this week learning about machine learning. I've watched some informative videos and worked through some useful examples in my Python Data Science Handbook. I am slowly getting a grip on it, and hope to get in some programming by tomorrow. I had a nice machine learning meeting with Nathan, Daniel, and our mentors yesterday where we got to learn about each other's projects and see where they overlap, and to chat about machine learning in general.

Outside of work, we had a successful trivia night on Tuesday. We won free drinks for guessing the number of goats in the Netherlands in 2013! Very useful information, I know. Emma, Beverly, and I also attended the Science on Tap talk last night in Santa Cruz. The next one is about marine mammals! And the t-shirt squad is working hard to get the ball rolling for our intern t-shirts.

Have a great 4-day weekend!

Posted by [rkahn](#) at Jun 29, 2017.

Hi Everyone!

This has been a great week! Monday's tour was really awesome..watching the tuna feed is by far the coolest thing I've got to see here thus far (Not including the trip to MARS ^). As far as research goes, I've been working with my mentor on improving the DVM algorithm that we created last week, I'm pretty confident that its working as it should be, but will manually check its accuracy for detecting backscatter maxima and minima in the data. I've also worked on a function for automatically detecting sun rise/set time for the time-series, which is more convenient when comparing month to month and season to season data. Yesterday I began working with climatology data from CTD, and hoping to see a DVM pattern that compare to physical/biological characteristics.

During the time I'm not learning/working on Matlab, I've been putting together a research proposal and a presentation for the REU to be presented tomorrow, wish us luck!

Currently working on t-shirt design, stay posted!

That's all for this week,
Have a great 4th of July weekend!

Ash

Posted by [asanchez](#) at Jun 29, 2017.

Hi everyone!

Officially (almost) two weeks at MBARI for me. Crazy how quickly it goes by.

This week I spent a good amount of my energy fixing my broken body--it's now fully recovered, thankfully. Despite being in recovery mode, I managed to get a bunch of things done:

- I was given a similar timeseries for the M1 mooring out in Monterey Bay as those I had been working with so far, so I ran all the analyses I had done on the other two datasets for this one (PCA, cross-covariance).
- I made two different bandpass filters to measure diurnal and upwelling variation signal in our data.
- Read more background papers on upwelling dynamics in Monterey Bay and the greater Northern California region.
- Learned how to use CO2sys in matlab to project pH using pCO2 and alkalinity values available to fill gaps in pH in the timeseries.

I still haven't zeroed in on my project's question exactly, but I think I'm getting closer. My mentor is also coming back next week, so I'll probably have a better idea by the next update.

Enjoy the long weekend!

Diego

Posted by [dsancho](#) at Jun 29, 2017.

Week 3 (I started a week later than most of you)

This week marks the start of a new project, the Benchtop simulator software is complete and behaves well when tested with previous mission logs. We have yet to test on an actual Coastal Profiling Float but as soon as we have one working in lab we will test the complete simulator system.

My new project is to implement a system for the CPF that logs accelerometer and magnetometer(compass) data at various depths. The goal is to measure underwater currents and hopefully use that data to correct for positional drift during missions. This week I got the sensors set up and tested them, the next step is to connect them to a microcontroller and get them talking. Eventually we want a self contained subsystem that is mounted in the CPF and logs data onto an SD card.

I've begun my project write-up for the Benchtop simulator in LaTeX at Overleaf.com. I'm sure many of you are already aware of it but if any interns are curious about LaTeX for typesetting their work I would be happy to show them the basics. Once you learn it you'll never write a report in Word again. LaTeX allows you to very easily change formatting to fit the standards of any academic journal, also handles figure placement, citations, and bibliography for you.

MBA behind the scenes tour was super cool, feeding the tuna is not an experience I will forget any time soon. Looking forward to more intern shenanigans and continuing the projects.

-Pierre

Posted by [pbaudin](#) at Jun 29, 2017.

Success!

This week has been full of successes:

1. I went back out on the Carson on Tuesday and felt wonderful! We were also able to capture two Pseudothecosomata (we saw 6, but they are surprisingly agile).
2. I got the sequence results back for my CO1 samples and have 23 out of 37 that worked. I'm sorting thorough the data now and cleaning up the sequences.
3. I started the other two sequences today (H3 & 28S) and should have results by tomorrow.

Sorry that I missed you all on Monday- I got all the way to MBARI when I realized the Aquarium trip was that day... I heard you all got a great behind the scenes tour 😊

On a non-research related note- I've been spending the evenings tearing my new house apart- hopefully it'll be livable by July 17 because we need to be out of our apartment...

Cheers!
Megan

Posted by [mbassett](#) at Jun 29, 2017.

Another week. More data processing!

- Finally have a working data processing pipeline that converts image data and MBARI style annotations to the format I need.
 - Handpicked a training set for regular classification. This will allow me to explore how neural networks deal with interlaced video. It might also help me finetune a network on benthic imagery before I train the detection model.
 - Had a first machine learning meeting with some other interns/mentors. Had a lot of fun. Lots to learn from everyone.
 - Started experimenting with dealing with interlaced video.
 - Rewrote pretty much all the code I've written to be more modifiable and scalable.
- Nathan

Posted by [nyee](#) at Jun 29, 2017.

Hi all!

This week marked the end of the first phase of my experiment, which unfortunately looks like it might be less interesting than we'd hoped. The results from last Thursday's high resolution sampling were fairly similar to the results from the previous high resolution sampling - under the different light regime. Because of that, we did not do the high resolution sampling that had been planned for Monday, and I had a great time at the Aquarium instead!

The next phase of the experiment will involve changing the nitrate and carbon dioxide concentrations. I've spent a fair amount of time this week making new media for this phase. Gas with specific amounts of CO2 arrived today so we're going to start soon. We've been carefully monitoring the Chemostat that got too hot last week, and after adding some healthy algae it's starting to look better. The cultures I'm growing in the incubator have had some wonky growth rates, but I'm hoping they stabilize within the next couple of days so I can increase the light to the next level. I'm also going to do a small salinity experiment to test how the algae do at different salinities.

I'm looking forward to the extra long weekend!

Posted by [ehandler](#) at Jun 29, 2017.

Hi all!

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I'm looking forward to the extra long weekend!

Posted by [ehandler](#) at Jun 29, 2017.

Hello everyone,

I have finally finished up the data mining (for now) and have started to pre-process my sound files. I am using Pycharm with python to turn my wav files into clear spectrogram jpeg files to begin throwing into my CNN. I had some issues with library requirements for the representing those graphs. The intern meeting Danelle set up for the ML folks was very helpful and it was nice talking to everyone about my ML approaches.

I also got to design an idea for a the shirt which was fun. I can't wait to see how they end up turning out. I really enjoyed the MBA behind the scenes tour and seeing the green sea turtle eat a fish.

Cheers,

Daniel

Posted by [ddeleon](#) at Jun 29, 2017.

30-July-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

Week 8 has been busy but productive, nonetheless! I finally processed all of my data from my fixed samples and now have a beautiful graph to show my results! I still need to do some statistics and clean up my findings a bit, but everything seems to be coming together! I'm so happy to see all of the work I've put into this project start to become something.

Also, NASA was really cool (thank you George!!) and I'm looking forward to winning at the soccer game this weekend!

30-June-2011

This page last changed on Apr 10, 2017 by [kgomes](#).

The last week has been really interesting, and as usual very fast paced!

This Week:

- Read about Ocean Acidification
- Plotted pH and O2 mooring data and looked for a correlation with physical parameters
- Researched aquaculture companies in the CenCOOS region, and data platforms near the farms.
- Designed a survey for shellfish growers at next weeks workshop.

Next Week:

Attend a workshop on ocean acidification and shellfish growing. Ask lots of questions, and meet lots of people. Take careful and complete notes!

30-June-2016

This page last changed on Apr 10, 2017 by [kgomes](#).

click on the ADD COMMENT button below to post your update

31-July-2014

This page last changed on Apr 10, 2017 by [kgomes](#).

scroll down and click on the add comment button to post your update

9-July-2015

This page last changed on Apr 10, 2017 by [kgomes](#).

Activities

This page last changed on Apr 10, 2017 by [kgomes](#).

Use this page to post information about after-hours activities

- June -August - Films in the Forest (<http://www.foresttheaterguild.org/index.cfm/films.htm>)
- June 17th - Center for Ocean Solutions seminar down in Monterey - "Suing the Service: litigation strategy to end the No Otter Zone"
- June 21st - kayaking with Monterey Bay Aquarium and students from Pajaro Valley High School - part of the Watsonville Area Teens Conserving Habitats (WATCH). 930-1130 followed by a short presentation by you at MBARI. Need four - so far: Rebecca, Hana
- June 25th - Tim Thomas - "The Last Whale Hunt and Other Fishy Storees"; Pacific Grove
- July 18th - Moss Landing Antique Street Fair (http://www.monterey-bay.net/ml/special_events/street_fair.html)
- July 23rd - 31st - Pacific Grove's Feast of Lanterns (<http://www.feast-of-lanterns.org>)
- August 5-8th - Steinbeck Festival (www.steinbeck.org)

Films in the Forest

This page last changed on Apr 10, 2017 by [kgomes](#).

Films begin at dusk, and no film is longer than 2 hours. The theater opens at 6:30pm if you care to picnic. Admission is \$6.00 for adults and children under 10 are free. Movies are subject to change without notice. Come early; a pillow is recommended for the hard bench, and dress warmly. The concession stand is open through intermission serving popcorn, desserts and beverages hot and cold. All profits benefit the Forest Theater Guild and The Michel Willey Youth Scholarship Fund. The Forest Theater is a non smoking facility, absolutely.

The 2010 Films in The Forest Program is a labor of love of Susan Willey & Megan Terry. The Guild wishes to acknowledge both Susan & Megan for their leadership, support and commitment to the success of the Forest Theater Guild. A portion of the proceeds of this program shall contribute to the Michel Willey Youth Scholarships.

Please visit the Films in the Forest website at www.filmsintheforest-carmel.org.

Tuesday, June 15

THE JAZZ SINGER sponsored by Visions Graphic Design & The Doggie Gazette

Wednesday, June 16

SLEEPER sponsored by The Beach Crowd

Thursday, June 17

CASINO ROYALE sponsored by Forest Theater Guild

Tuesday, June 22

VICKY CHRISTINA BARCELONA sponsored by Inns-by-the-Sea

Wednesday, June 23

CITY SLICKERS sponsored by Blue Adobe Mortgage

Thursday, June 24

LA CAGE AUX FOLLES sponsored by Wells Fargo Home Mortgage

Tuesday, June 29

REVENGE OF THE PINK PANTHER sponsored by Carmel Kiwanis

Wednesday, June 30

MOONSTRUCK sponsored by Kelly Productions

Tuesday, July 6

GOLDFINGER sponsored by Pine Inn

Wednesday, July 7

OCEAN'S 11 sponsored by Friends-of-Film

Thursday, July 8

MEN IN BLACK sponsored by Bank of America Home Loans

Tuesday, July 13

THE PRESENT surf documentary sponsored by Liquid Surf Shop

Wednesday, July 14

BEETLEJUICE sponsored by The Beach Crowd

Thursday, July 15

SHAPED local premiere of a documentary by Walter Georis sponsored by Carmel Valley Art Center

Tuesday, July 20

HAROLD AND MAUDE sponsored by Holly's Noir Night

Wednesday, July 21

MAMMA MIA sponsored by Keller-Williams Realty

Thursday, July 22

SHREK sponsored by Pebble Beach Company

Tuesday, July 27

HOTEL FOR DOGS sponsored by Diggidy Dog and Carmel Drug Store

Wednesday, July 28

MICHAEL JACKSON'S "THIS IS IT" sponsored by Carmel Stamp & Coin Shop

Thursday, July 29

ARTHUR sponsored by J. Lohr Winery

BBQ

This page last changed on Apr 10, 2017 by [kgomes](#).

Test

News

This page last changed on Apr 10, 2017 by [kgomes](#).

**This page can be used to post information that might be of interest to all interns.
Please begin each entry with the posting date.**

-

Opportunities to Go to Sea

This page last changed on Apr 10, 2017 by [kgomes](#).

If you are interested in getting out on one of the ships, you may be able to go on one of the following dates. More dates will be added, so keep an eye on this page! Let George or Linda know if you are interested (as far ahead as possible).

- June 17th - Melissa, Spencer, and Hank - need to be at dock by 0630
- June 18th - Point Lobos - Chaffey; Roman and Katie
- June 22nd - Point Lobos - Rebecca
- June 24th - Point Lobos trip: Aaron and John
- July 1st - Benthic ROV Cruise (six spots available); contact Linda or George if you are interested. Hana, Bartolome, Daniel, Sara, Katherine, Matthew

- July 1st - Zephyr - Sandeep

still need to get on the boat:

Isobel, Sandeep, Christopher

Before going out to sea (ask Linda if you have questions; there is some on her desk near the phone):
Dimenhydrinate (50 mg) - same thing as Triptone or Dramamine: 0.5 to 1 tablet before you go to bed

In the morning:

Another 0.5 to 1 tablet as soon as you get up (this needs time to work - if you wait until you are on the boat, it is way too late) along with 1 caffeine tablet.

Eat something bland like bananas, graham crackers, saltines, Ensure

NO coffee or juice (too much acid)

Four hours later (depending on how you feel - if it is very calm out there, you might be able to skip this)

Another 0.5 to 1 tablet, and 1 caffeine tablet

Eat something bland like bananas, graham crackers, saltines, Ensure

NO coffee or juice (too much acid)

Recreational Activities

This page last changed on Apr 10, 2017 by [kgomes](#).

Schedule

This page last changed on Apr 10, 2017 by [kgomes](#).

- MBARI closed: June 18; July 2, 5, 6, 16, 30; Aug. 13.
- June 14th - MBARI interns arrive and start their program
- June 14th - Summer Intern Cookie Break
- June 15th - MBARI Blood Drive
- June 16th - Glenn Chen Seminar
- June 17th - Center for Ocean Solutions Policy Seminar
- June 21st - Kayaking with MBA. 9-1130
- June 21st - Intern Meeting 0830-1030 in Tank View Conference Room
- June 21st - Project update. Josi Taylor
- June 28th - Proposal Workshop 11-12 in Pacific Forum, Linda in San Francisco
- June 29-30 - Day of Science, Engineering, and Technology/ MBARI Board meeting
- July 5th and 6th - MBARI holidays
- July 7th - Ari Shapiro Seminar
- July 11-16 - George out of the office
- July 12th - Project Update. David Clague. Submarine Volcanism
- July 19th - Project Update. Gene Massion. McSTAR, Linda in Washington DC (19-21st) for Deep-sea coral workshop
- July 21st - Interns host BBQ, Mark Abbott Seminar
- July 28th - Dijanna Smotherman Seminar
- July 31st - MBARI Picnic
- August 1st - MBARI Golf Tournament
- August 2nd - Project Update. Andreas Hofmann. Anthropogenic Ocean Acidification
- August 4th - Amber Mace Seminar
- August 14th - MBARI OPEN HOUSE
- August 18th - MBARI Intern Symposium at MBARI

DOEST Agenda

This page last changed on Apr 10, 2017 by [kgomes](#).

looks better in the attached pdf

AGENDA

Day of Engineering, Science
and Technology

Tuesday, June 29, 2010

8:45 a.m. - 4:00 p.m.

Pacific Forum (except as noted)

Theme: Looking to the Future

Time Title Presenter(s)

8:15 - 8:45 Breakfast

8:45 - 9:00 Introduction Chris Scholin
President and CEO

MBARI Pushing the Envelope

9:00 - 9:30 Controlled, Agile and Novel Observing
Network (CANON) Francisco
Chavez

Senior Scientist

9:30 - 10:00 Vision for the technologies
of the future

Jim Bellingham

Chief Technologist

10:00 -10:30 Data from the depths around the clock
(MARS)

Craig Dawe

Technical Support Manager/

MARS Manager

10:30 - 11:00 BREAK

11:00 -11:30 The ocean in a high CO2 world,
from deep to shallow

Peter Brewer

Senior Scientist

11:30 - 12:00 How do we observe biogeochemical
cycles at the global scale in a
changing world?

Ken Johnson

Senior Scientist

12:00 - 1:00 LUNCH - Pacific Forum

Persistent Presence

1:00 - 1:30 Group 1 (Test Tank)

Long Range AUV

CANON Field tools

Moored ESP

Group 2 (Building D High Bay)

Benthic Imaging AUV

MBARI new vessel designs

Brian Kieft

Software

Engineer

Thomas

Hoover

Instrumentation

Engineer

ESP Team

Brett

Hobson

Mechanical

Engineer

Keith

Raybould

Chief Operations
 Officer
 1:30 - 2:00 Group1 and 2 switch
 2:00 - 2:30 BREAK - Walk back to the Pacific Forum
 A Look Forward
 2:30 - 3:00 Extending an autonomous presence
 (wave-powered buoys
 and AUV docking)
 Andy Hamilton
 Systems Engineer
 3:00 - 3:30 Ocean visualization
 Dave Caress
 Software Engineer
 Brian Schlining
 Software Engineer
 Brett Hobson
 Mechanical Engineer
 3:30 - 4:00 Exploration and discovery: careful
 plans and serendipity
 Bob Vrijenhoek
 Senior Scientist
 4:00 - 6:00 Allhands reception in Atrium
 Posters in the Pacific Forum
 ? Sediment traps and ROV operations under
 icebergs
 ? High-Resolution AUV Mapping Reveals
 Structural Details of Submarine Inflated Lava
 Flows
 ? Topography within the axial channels of
 Monterey and Soquel Canyons
 ? Development of a High-Resolution Shallow
 Seismic Refraction Tomography System at
 the Monterey Bay Aquarium Research
 Institute
 ? Distinctive Fine-Scale Morphology of Hydrate
 Ridge
 ? Fine-Scale Morphology of Gas-Rich Sites on
 the Cascadia Margin Near Bullseye Vent
 ? Fine-Scale Morphology of West Mata Volcano
 and the Northeast Lau Spreading Center, Lau
 Basin from AUV Multibeam Surveys
 ? Connecting an Ocean-Bottom Seismometer
 to a Seafloor Cabled Observatory: A
 Prototype System in Monterey Bay
 ? Development of in situ Respirometers for
 Ocean Acidification Studies
 ? Time series analysis of six whale-fall
 communities in Monterey Canyon
 ? Cataloguing biodiversity in the deep-sea:
 tools, techniques, and challenges
 ? Remote Detection of Marine Microbes and
 Functional Genes Using the ESP
 ? Brett Hobson
 ? Dave Clague
 ? Eve Lundsten
 ? Rich Henthorn
 ? Charlie Paull
 ? Hans Thomas
 ? Dave Caress
 ? Paul McGill
 ? Michael Risi, Craig Okuda,
 Bob Herlien
 ? Kyra Schlining
 ? Nancy Jacobsen Stout

? ESP Team member

This Week

This page last changed on Apr 10, 2017 by [kgomes](#).

WEEK TEN

9 am Test Tank

I. Review, preview, and updates

- Presentations: easiest to use Tempest/PacificForum for your presentations - check to make sure that they work.
- Future: Addresses and updates
- Presentations: easiest to use Tempest/PacificForum for your presentations - check to make sure that they work.
- Pronunciations?

II. Individual updates

- ? Check confluence for updates MISSING: ROMAN, JOHN, IZZY, AARON

III. Past events

- A. August 10th - Katie Lodes (10 am)
- B. AUGUST 14TH - MBARI OPEN HOUSE

IV. Upcoming events (see MBARI calendars and/or intern calender)

- A. Moving out
- B. Inventory
- C. Departing - rides?
 - Sandeep
- D. Intern T-shirts
- E. 2 hard copies, 1 electronic copy (my tempbox), id card, key card, evaluation....
- F. INTERN SYMPOSIUM

V. Seminars coming up

- B. August 17th - John Horne (1 pm)
- ◦ George will be leaving early most of this week (rehearsals)

Wednesday 2-July-2014

This page last changed on Apr 10, 2017 by [kgomes](#).

Finally on time with this! Although this week has been short, it has also been very productive. Yesterday I ran PCR using tissue from a second species of squid (*Pterygioteuthis*), and today I'll move on to the third species (*Phylliroebucephalum*, not a squid but most likely has photoproteins). I also cut and processed some promising bands out of my *Dosidicus* gel, which will be sequenced sometime next week. Overall, my lab days have a pretty good rhythm now: plan out PCR, run PCR, pour gel, image gel, troubleshoot. Excited for the long weekend!

4th August 2011

This page last changed on Apr 10, 2017 by [kgomes](#).