

Engineering Weekly Report 5/30/2024 - 6/6/2024

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2024/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - Brainstorming for 2025 proposal
 - 902106 - Niobicon-Based AUV Docking Development
 - Preparing AUV and mooring for deployment
 - Overhead
 - Nitrox diving online training
 - Out of Office
 - 1 day off
- Danelle Cline
 - 902111 - Carbon Flux Ecology
 - Finished optimizing FastAPI for bulk changes
 - Project proposal input
 - 500055 - VARS, M3/RS, DSG
 - Closed clustering tasks; Kevin has addressed. Thanks, Kevin!
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Performance improvements to CDK design to add elastic GPU YOLOv5 scaling
 - 901502 - Passive Acoustic Sensing
 - Working on PBP time metadata feature improvements
 - Summer intern intro and project counsel
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Setup a slack bot called UAV bot for notifications of automated processing, and thanks for the good work by Daniel and Peter in IS and Duane, we now have 5 GPUs for use! 1 CPU will be the newly installed GPU IS supported GPUs attached to Doris.shore.mbari.org. Lastly, stubbed a REST endpoint for running our processing workflow which can send a message through the UAV bot.
 - Overhead
 - DOEST materials
 - Out of Office
 - Vacation June 5-20
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Prepared AWS user, Sagemaker Studio for incoming intern Suzanne Stathatos

- Overhead
 - DOEST
- Out of Office
 - June 10 - 21, 2024. Vacation UTC-8
 - Sept 17 - 20, 2024. PyTorch Conference, San Francisco
 - Oct 21 - Nov 8, 2024. Vacation UTC+1
- Jon Erickson
- Kevin Gomes
 - 300059 - DMO Support - RV David Packard
 - Set up Marine Traffic account for DMO ops (more work needed here)
 - Overhead
 - DOEST Prep and practice
 - DOEST meeting
 - Out of Office
 - June 7: Out of office
- Andy Hamilton
- Kent Headley
 - Out of Office
 - Jun 4-7
- Rich Henthorn
 - Out of Office
 - May 28 - June 5: Vacation
 - June 20: SES deployment on Carson
 - July 3 - 11: Vacation and WFH
 - Aug 26 - Sep 11: Vacation
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Troubleshooting new mini ISUS stacks, got them working
 - Started mini ISUS baseboard
 - Started planning for Nanofet v2
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Cleaned up bitbucket repos and readme files
 - Boards are here, given to Jose for soldering
 - Overhead
 - Bike to work day (organize/lead)
 - Read a paper re: ADVs on gliders, in prep for proposal
- Scott Jensen
 - 300078 - DMO Support - AUV
 - Putting some thought into how to protect the motor through electronics of the new drive in the case of excessive towing speed.
 - 706005 - eDNA Grass Carp Sandusky
 - Did a quick on site repair of the ESP Instrument located on the Maumee River in Toledo, Ohio.
 - 706008 - READI-Net
 - Started a calibration of the transfer function of the paddle wheel flow sensor. Luckily the volume per pulse is proportional to pace. With that and the ability to scale the pace epoch and volume unit, a simple counter with offset has been implemented. The actual volume can then be converted in the upper level Micropython at a slower rate.
 - Out of Office
 - June 17-21 vacation

- July 18-23 vacation
 - July 24-29 vacation
- Brent Jones
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 05/27-06/21 (GMT+1)
 - 07/08-07/12 (HST)
 - 07/16-07/22 (EDT)
- Denis Klimov
- Eric Martin
 - 901101 - Seafloor Mapping
 - Lidar meeting last week, many things discussed
 - Moving sled into High bay for tear down
 - 901217 - Chemical Sensor Program
 - Presented energy harvesting scripts, need more data
 - small code modifications for energy data.
 - 902204 - Scalable Robotics
 - Mola Efforts in the test tank, upgrades for lamps/dvl
 - Mola Stereo component bench testing
 - Planning for Ventana Cruise Day 8/6/24
 - Overhead
 - SEE interviews last week, meeting Monday
 - Telepresence paper submitted to IEEE telepresence
 - Out of Office
 - Vacation Friday June 7th
- Thom Maughan
 - 300070 - DMO Support - Ventana
 - Sampling delay problem solved - mechanical fix. Wahoo.
 - 300083 - DMO Support - LRAUV
 - Working i2c driver for charger board
 - 901805 - Coastal Biogeochemical Sensing Program
 - (901217) Getting close to having the ISUS driver stack running in pHFET-SOS on Tiva. Working thru board proto hardware issues.
 - Mini-Isus digital board works. New MMS Digital boards also work.
 - Rebuild of Mooring ISUS instrument.
 - Out of Office
 - June 20 - 26. Texas
 - Aug two to three weeks vacation Colorado.
- Mike McCann
 - 901101 - Seafloor Mapping
 - Revamped how the [exclude directory list is managed](#), now follows the survey_tally workflow
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Final review of Monique's paper
 - 902403 - Expedition DB Modern
 - Had IS create the expd.shore.mbari.org VM for hosting of expd-django
 - Added additional ROV data endpoints and configured the admin interface for expd-django
 - Out of Office

- 20 June - 19 July: Vacation
 - 22 - 25 July: ESIP Federation Summer meeting, Asheville, NC
 - 28 July - 1 August: SIGGRAPH, Denver, CO
- Rob McEwen
- Paul McGill
 - 300070 - DMO Support - Ventana
 - Reviewed final version of power monitor board so Duane T. can send to fabrication
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Helped with two UAV missions on Wed at New Brighton and Seacliff beaches
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Helped Alana and Jim B. with their DOEST presentation
 - 902304 - Piscivore Cam
 - Corrected wrong version of firmware on camera controller
 - Helped with Piscivore camera deployment on Mon
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Sealed battery sphere on SES and installed new cable on Trigger Trap
- Enoch Nicholson
 - 706008 - READI-Net
 - Received all parts
 - Started FIDO Assembly
 - 902306 - SINKER
 - Sliding carriage prototyping & design
 - Out of Office
 - April 5-10 Vacation (Available via Slack & Email)
 - April 14-18 IEEE Oceans (Available via Slack & Email)
 - April 19-23 Vacation (Unavailable)
 - September 19-24 Vacation (Available via Slack & Email)
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Offsite on Tuesday and Friday
 - January 16 - January 19, 2024
 - February 22, 2024
 - March 4 - March 8, 2024 - vacation
 - April 24, 2024 - vacation
 - May 20 - May 24, 2024 - vacation
 - June 17 - June 18, 2024 - vacation
- Paul Roberts
 - Out of Office
 - June 21, 28
- Brent Roman
 - 708165 - NOAA-MERHAB-UW
 - Ongoing support
 - 901205 - ESP SURF Center
 - With Scott's help on-site, restated one of the ESP's in Ohio
 - Added support for a secondary "skimmer" external sampler
 - Including pressure monitoring and recovery from head pressure loss
 - Out of Office
 - June 20 - June 31 (gunkholing in the Sacramento Delta)
 - July 1 - Aug 31 (Vacation in Japan)

- Carlos Rueda
 - Out of Office
 - June 10–13: vacation
 - July 2–3, 22–25: vacation
- Karen Salamy
 - Out of Office
 - I will be out several days this month (May 21-22) for shoulder surgery.
 - On-campus 3 days/week (**T, W, TH**).
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Continuing work on <https://github.com/mbari-org/oni>
 - Discussions with Paul Rogers for contract work on KB/Oni user interface.
 - 902002 - FathomNet
 - Tech discussion with NOAA about data archiving pipeline.
 - 902404 - 5th Marine Imaging Workshop
 - Meeting with Science Committee chair
 - Sent many emails to let potential speakers know that the abstract deadline was extended until June 10th.
 - Notified authors that their abstracts were received.
 - Overhead
 - Working on arranging a trip to DARC to update their VARS system.
 - Watched DOEST talks
 - Out of Office
 - May 16-21 - Vacation
 - Jun 10-14 - Setting up video lab at OSU
 - Jul 8-11 - Updating video lab at DARC
 - Jul 15-24 - Vacation
 - Aug 19-22 Vacation
 - Sep 5-9 - Vacation
 - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Alana Sherman
- George Stern
 - 902304 - Piscivore Cam
 - New light baffle design, fabrication and testing
 - Final light + sensor assembly and test tank test before fielding
 - Ambarella computer vision product line research
 - 902306 - SINKER
 - Fixturing and form factor for the motor boards
 - Layout review of motor interface board
- Johann Voigtlander
 - 901809 - Deep Sea Bioinspiration
 - Troubleshooting integration of VectorNAV VN-300T IMU to arduover
 - 902402 - CSEM
 - Bought and configured a GPS receiver for the triggerbox
 - Out of Office
 - April 16th - May 7th Germany CSEM
 - May 8th - May 12th Vacation