

Johann Voigtlander Sorted By Project

702108 - Deployable AI

901200 - AMP

901809 - Deep Sea Bioinspiration

- Troubleshooting integration of VectorNAV VN-300T IMU to arduover (Week 23)

902204 - Scalable Robotics

- Built up Blue Robotics Blue Boat. Updated firmware, ready for testing. (Week 21)
- Investigated various IMU options (Week 22)
- Purchased replacement latch for the BlueBoat (Week 22)
- Working on integrating the VN-300T AHRS into the blueboat (Week 24)
- Wrote a labVIEW program to interface with VN100/VN300 AHRS (Week 26)
- Created a datalogger to record VN300 data on a raspberry pi and integrated it onto the BlueBoat (Week 27)
- IMU Datalogger simplified and enhanced (Week 28)
- Created a script that syncs the Raspberry Pi's time with GPS GPRMC sentences (Week 29)
- I looked into using the InertialSense IMU for GPS YAW. It unfortunately doesn't send out GPHDT sentences. I am looking for alternatives. (Week 29)
- Familiarizing myself with the new Norbit MBES, looking into integrating into the blueboat and the MiniROV (Week 29)
- Added ethernet switch to blueboat (Week 30)
- Started designing multibeam mount (Week 30)
- Debugging VN300 issue with vectornav (Week 31)
- Purchased antenna upgrades, mounted new antenna on boat (Week 31)
- Built Norbit multibeam mount for the BlueBoat. (Week 32)
 - Tested the drag in the test tank (Week 32)
- Debugging VN300 integration issues (Week 33)
- Replaced Navigator flight controller to connect VN300 (Week 34)
- Found cabling solution for Norbit -> BlueBoat (Week 35)
- Purchased and built up WBMS cable for Norbit -> Bluetrail bulkhead (Week 36)
- Installed 24V power supply (Week 36)
- Installed and configured 24V relay (Week 36)
- Completed wiring an testing WBMS (Week 37)
- Reprinted WBMS Blueboat mount with correct mounting hole sizes (Week 38)
- Put the BlueBoat in the test tank to collect WBMS data (Week 40)

- Reprinted mount for WBMS with correct hole size (Week 40)
- Tested the BlueBoat in the harbour and ran a small survey (Week 41)
- Integrated a time server on the blueboat network (Week 41)
- Worked with Akshay to integrate his WBMS logging code and tested it (Week 41)
- 3D printed bracketry for WBMS swivel (Week 41)
- Dismounted Norbit WBMS - going to be installed on MiniROV (Week 44)
- MiniROV Operations all well (Week 45)
- Reinstalled VN300 drivers and setup for BlueBoat (Week 46)

902208 - Mini ROV Operations

- Building a backup Focal box (Week 2)
- Completed Aux Camera side mounts (Week 3)
- Continuing building fiber optic focal box (Week 3)
- Removed tool sled (Week 4)
- Working on joystick upgrade (Week 4)
- Removed CoMPAS tool sled (Week 5)
- Finalized Focal box schematic updates (Week 5)
- Configured Labview miniROV libraries to open the main program and updated documentation (Week 5)
- Reinstalled Focal Box (Week 6)
- Started preparing racks for 20' container (Week 6)
- Started DSP&L RMA (Week 6)
- Started installing 19" racks for the 20' container deployments (Week 7)
- Continued installing MiniROV control electronics in 20' container racks (Week 8)
 - Debugged clump connection issue with Alana & again later with Dale (Week 8)
 - Main, Co-pilot, Clump, Overlay, Sonar, and video multiview all working (Week 8)
- Updated documentation (Week 8)
- Sent out broken DSP&L for RMA (Week 9)
- Completed wiring topside racks in 20' container (Week 9)
- Completed 20' container topside wiring (Week 10)
- Ballasted MiniROV with Frank (Week 10)
- Modified Labview code to accept GPCCA NMEA sentences (Week 10)
- Calibrated stereo cameras in the test tank with Paul R (Week 11)
- Moved MiniROV logs from raid to atlas (Week 11)
- Working with DJ to integrate 4DNAV into the control van (Week 11)
- Solved latency issue in clump GUI (Week 11)
- Completed code and hardware changes for joystick buttons - needs testing (Week 12)
- Troubleshooting a ground fault on the vehicle. Localized it to one of the thrusters. (Week 12)
- Looking into MiniROV integration into RC (Week 12)
- Resolved ground fault issue with the port forward thruster - did maintenance on that thruster while it was open (Week 13)
- Installed VR can on the vehicle and ballasted (Week 13)
- Conducted tests in the tank for the new buttons on the main console (Week 13)

- Sent over the new focal box to be built (Week 13)
- Installed ROVVR on MiniROV to enable students from Harvey Mudd University to test their VR system in the test tank (Week 14)
- Vehicle maintenance - stopped a leak on the umbilical J-box (Week 14)
- Added a new NUC and piped it into the system to remote desktop 4DNAV (Week 14)
- Re-terminated video BNC & ethernet cable on RC to connect to ROV control van (Week 14)
- Opened up core JBox & fiber JBox for maintenance. (Week 15)
- Fixed labview Modbus code - still investigating issue connecting to core JBox (Week 15)
- Refurbished manipulator gripper to spin concentrically for ice coring (Week 20)
- Connected VARS to SHORE network so Lonny & Brian can download data (Week 21)
- Started ice core testing (Week 21)
- Conducted several ice drill tests, and managed to drill ~2.5" deep. (Week 22)
- Met with Giancarlo to discuss Arctic trip mapping integration and logistics (Week 24)
- Connected the focal 907 console + remote PCBs. Confirmed functionality of serial ports, analog cameras and GBE PCB (Week 25)
- Sent out PO for HD camera replacement (Week 25)
- Built up mapping sled and tested the system (Week 26)
- Got a quote for Ranger Mini 2 system (Week 26)
- Put Modbus code on Github (Week 26)
- Relocated 20' container to the end of the island (Week 27)
- Rebuilt manipulator control console (Week 27)
- Obtained a quote for the ranger 2 system (Week 27)
- Obtained a quote for Focal 907-Serial expansion (Week 27)
- Integrated the VN100 & VN300 with labview (Week 27)
- Refurbished benthic sled interface can bulkheads (Week 28)
- Disconnected mini, clump, and winch and set up the display for the open house (Week 29)
- Continued on Labview VN-300 integration upgrade (Week 30)
- Assisted moving 20' container back (Week 31)
 - Reconnected control van to ROV (Week 31)
- Mounted Oculus MD1200d to MiniROV (Week 31)
- Re-installed all ComPas hardware into control van (Week 31)
- Took apart the EPOD and started the Focal motherboard upgrade. (Week 32)
- EPOD Focal Upgrade: (Week 33)
 - Installed new 907+ Remote motherboard (Week 33)
 - Installed additional CWDM yelloBrik module (Week 33)
 - Confirmed all serial ports functional (Week 33)
 - Confirmed aux cameras work (Week 33)
- Purchased Focal 907 debug PCB (Week 33)
- Solved many issues after upgrading the Focal stack. Vehicle is operational again. (Week 34)
 - Updated schematics (Week 34)
- Rewired and fixed small issues with Focal box upgrade (Week 35)

- Updated schematics and documentation (Week 35)
- Created new schematics for benthic can 24V upgrade (Week 35)
- Helped mount mapping equipment on benthic sled (Week 35)
- Swapped Mink10 short to Mink10 long on benthic serial can (Week 36)
- Rewired benthic can to support 24V input (Week 36)
- Installed ethernet switch in benthic can (Week 36)
- Rewired all fiber connections in the control van (Week 36)
- Replaced broken switch in manipulator joystick (Week 36)
- Started RMA process for winch level wind motor which had broken pins on delivery (Week 36)
- Tested new DSP&L HD Multi SeaCam (Week 36)
- Mounted GT hardware (Week 37)
- Remade laser mount to clock 90 degrees (Week 37)
- (Week 37)
- Test tank operations for Giancarlo (Week 38)
- Debugged dropout issue (Week 38)
- Took apart EPOD, tested with Alana - repaired EPOD and remounted (Week 38)
- Fixed some network wiring in Focal box (Week 38)
- MiniROV debugging in test tank (Week 39)
- Built up cable for WetWifi - completed some tests and built a LabVIEW program based on our 'overlay.vi' code to grab ZMQ strings (Week 39)
- Purchased 2x Joysticks and a button controller board (Week 39)
- RMA on level wind motor (Week 39)
- Obtained additional camera, laser, and multibeam data in the test tank (Week 39)
- Writing code to solve joystick disconnection issue (Week 40)
- Fixed some video issues in the back of the control van (Week 40)
- Ballasted midwater sled (Week 40)
- Designed and printed camera mounts at different angles (Week 40)
- 3D printed multiple HD camera mounts at different angles (Week 41)
- Ordered manipulator joystick switch to add a "stop" position on the wrist (Week 41)
- Built cable for wetwifi and 3D printed potting mold (Week 41)
- Inspected RC SDI coax minirov connection, working with DJ to test the corroded termination to see if it needs to be reterminated. (Week 41)
- Set up the MiniROV and control van to include ROVVR equipment (Week 41)
- Went in the test tank with the ROVVR students from Harvey Mudd (Week 41)
- Installed software for 2x spare NUC PCs for the MiniROV (Week 41)
- Mobilized MiniROV onto RC (Week 44)
- 2 days at sea for Kakani (Week 44)
- MiniROV Maintenance, issue with clump weight thruster ground fault (Week 44)
- Demob (Week 45)
- Mobilized MiniROV onto Fulmar (Week 46)
- Configured a new time server for mobile rack (Week 48)

902402 - CSEM

- Organizing R.V. Fulmar for Sept. Cruise (Week 3)
- Submitted CSEM vessel proposal (Week 6)
- Organizing dates & flights to Kiel, Germany (Week 11)
- Working out logistics for the April trip (Week 12)
- Preparing for CSEM trip in mid-April (Week 14)
- On RV Alkor in the North Sea. Learning the CSEM system. (Week 18)
- Successful CSEM trip in the North Sea April 22 - May 6th on the R.V. Alkor (Week 19)
 - Gear should be shipped within the next week to the US (Week 19)
 - Compiled manual to connect, change settings, deploy, and retrieve CSEM instruments (Week 19)
- Working on spare parts/budgeting (Week 20)
- Working on shipping logistics to bring the SWAN system to MBARI from Germany. (Week 21)
- Stored the bulk of the gear @ESB (Week 22)
- Purchased GPS receiver for trigger box, and investigated GPS options for the buoys (Week 22)
- Refurbished one of the transmitters (Week 22)
- Drying out receivers for long-term storage (Week 22)
- Bought and configured a GPS receiver for the triggerbox (Week 23)
- Refurbished one of the transmitter electrodes (Week 24)
- Wrote a labview program to connect to the triggerbox and dataloggers via TCP. Trying to decode the binary data (Week 24)
- Prepped a few cables for potting repair (Week 25)
- Developed data processing logic for the datalogger GUI in LabVIEW (Week 25)
- Refurbished the transmitting antenna (Week 27)
- Proposal submitted (Week 28)
- Organizing ship time for either later this year or early 2025 (Week 29)
- Met with Steve Constable and brainstormed on CSEM upgrades (Week 30)
- Met with Steve Constable, a CSEM expert and talked about the system and potential upgrade points (Week 31)
- I am working with Eliana to determine the timing between the start of the transmission and when the sensors first detect the signal (Week 31)
- Talked to Jean from NOAA, trying to book a CSEM slot later this year (Week 32)
- Wrote up SWAN deployment and recovery procedure for permit (Week 36)
- Organized line replacement of frayed rope (Week 36)
- Ongoing communications with R.V. Fulmar, R.V. Shana Rae, and R.V. John Martin for CSEM cruise later this year. (Week 36)
- Purchased GPS dataloggers (Week 37)
- Purchased GPS loggers, programmed and tested them (Week 38)
- Purchased winch -> fulmar power adaptor cable (Week 38)
- Working with Mike Conway for CSEM repairs/fulmar compatibility (Week 38)
- Organized fabrication of winch mounting plate (Week 39)
- RMA a broken GPS logger (Week 39)

- Met with Capitan of Fulmar to discuss deployments (Week 41)
- Investigating power requirements for the black winch (Week 41)
- Purchased waterproof housings for the GPS loggers (Week 41)
- Using 2 winch setup, rewiring the black winch to use 240V 3-phase. (Week 44)
- Wrote up a deployment procedure (Week 45)
- Edited deployment video with annotations (Week 45)
- Setting up the last few things before deployment (Week 46)
- Getting everything ready for MOB (Week 48)

Out of Office

- April 16th - May 13th Germany CSEM
- April 16th - May 7th Germany CSEM
- May 8th - May 12th Vacation

Overhead

- OrCAD Training (Week 4)
- LabVIEW Training (Week 4)
- Helped out with an AUV recovery mission on the Paragon (Week 8)
- Completed Moxie training for maritime signaling (Week 10)
- Completed onsite forklift training with Greg (Week 12)
- Completed several LabView Core 2 components (Week 12)
- Completed LabView Core2 course (Week 14)
- Completed Moxie Media marine survival (Week 20)
- Completed Moxie Media safer seas act (Week 20)
- Completed 2x Moxie media training courses (Week 22)
- Completed workplace violence training (Week 32)
- Gave a tour to scripps institute student (Week 39)
- (Last week 10/14-10/18) STCW training (Week 44)