CURRICULUM VITAE

Timothy V. Kane
Sr. Engineering Assistant I
Geology & Geophysics Department
Woods Hole Oceanographic Institution, Woods Hole MA 02543
Work: 508 289-4861 Cell: 781 267-5231 or tkane@whoi.edu

EDUCATION:
Associate Degree in Applied Science of Electronics Technology
- Pascal Instrument Center New Mexico: Guralp 3T seismometer repair
- Guralp factory, England: Guralp seismometer repair. These are the most widely used seismometer in WHOI seismograph instruments

PROFESSIONAL EXPERIENCE:
I am currently working as a Sr. Engineering Assistant I in the OBS (Ocean Bottom Seismograph) group in G&G.

11/7/2011- Sr. Engineering Assistant I – Promotion
3/31/2009 - Engineering Assistant III - Promotion
12/1/2008 - Engineering Assistant II - Hire date

PROFESSIONAL ACTIVITIES:
- My major responsibility is to deploy and recover both short period and broadband ocean bottom seismographs at sea, supporting scientific experiments. Other responsibilities include building, testing, troubleshooting of electronic and mechanical assemblies used in WHOI seismographs.

- I have extensive experience in building automated electronic test fixtures. This includes the use of Arduino Mega 2560 series pcb and programming in "C" language utilizing the Arduino Integrated Development Environment for programming. These designs include an Automated Battery Tester that tests a variety of lithium and lithium primary batteries used in WHOI seismographs, and a fixture to calibrate Differential Pressure Sensors used on WHOI seismographs, and most recently I designed a Fresh Water Release system which was successfully used in 2016 and again in 2017, where it is currently deployed on WHOI short period instruments in a seismic array on the bottom of Yellowstone Lake.

- I am also responsible for maintaining about 80 geophone sensors, a mix of Guralp 3T sensors, Trillium sensors and 80 DPG (Differential Pressure Gauges). This requires testing, troubleshooting, repair, general maintenance of the sensors, pressure housings, bulkhead connectors and cables. I perform slab testing of every sensor which often results in the

troubleshooting and repair of Guralp 3T seismometers and Geospace geophone elements.

- I am proficient in the use of OrCad schematic capture and 3D mechanical design software (DS Mechanical and Cura) for use in 3D printing. I use 3D printing for many applications in our lab work.

- I have worked casually for OOI performing testing and writing test protocols. I have also worked in the REMUS group building electro-mechanical assemblies, performing tests and wiring.

- In the summer of 2017 I made a presentation to the Board of Trustees highlighting the technical challenges and successes of the WHOI OBS (in this case LBS) work done in Yellowstone Lake in 2017.

OUTSIDE WHOI PROFESSIONAL ACTIVITIES:

Smiths Medical North America – Rockland, MA Sept. 2008–Dec. 2008

Contract Engineering Services
- Smiths Medical R&D Critical Care, Thermal Management group.

Haemonetics Corporation, Braintree, MA 1990 – 2008

Electrical Engineer ~ Surgical R&D 2003 – 2008
- Electrical Engineer in an R&D new products development group. Multiple blood apheresis projects.

Associate Engineer ~ Surgical R&D 1998 – 2003
- Design of test fixtures, perform schematic capture. Testing of experimental devices in surgical theater. Extensive blood lab experience at the Naval Blood Research Lab in Boston

Technical Specialist ~ Blood Bank R&D 1990 – 1998
- Component level testing and troubleshooting of prototype devices used in apheresis.

Honeywell Information Systems 1979-1990

Associate Engineer
- Environmental & Safety Engineering - Radiated & conducted emissions testing of computers and peripherals to gain FCC certification.

Test Technician-A
- Component level troubleshooting of high speed disk controllers and peripherals for Honeywell's Level 6 mid-size computers. Held security clearance to work on General Purpose Interface boards used by the military at Kennedy Space Center.

PROFESSIONAL AFFILIATIONS:

- Member of G&G Annual Review Committee 2015 and 2017
- Member of Graded Marine Personnel Committee 2014-2015

RESEARCH INTERESTS:

Providing electrical and mechanical engineering support for scientific experiments both at sea and on land.

CRUISE PARTICIPATION:

1) 2017 Aug: Yellowstone Lake, Yellowstone National Park. Deploy 10 OBS.

2) 2016 Aug: Yellowstone Lake, Yellowstone National Park. Recover 2 OBS.

3) 2016 Jul: Yellowstone Lake, Yellowstone National Park. Technical lead, deployment of 3 short period OBS, recover 1.

4) 2016 Nov – Dec: R/V Marcus Langseth; Piraeus, Greece to Heraklion, Greece. Deployment and recovery of 30 short period OBS.

5) 2015 Dec 29 – Feb 28, 2016: R/V Langseth (Columbia University)

6) 2015 Aug: R/V Oceanus; Newport, OR to Newport. Recover 24 OBS.

7) 2015 Apr - May: USCGC Oak; San Juan, PR to Charleston, SC. Deployment of 6 OBS.

8) 2015 Apr: R/V Endeavor; N Kingstown, RI to N Kingstown, RI. Recovery of 30 OBS.

9) 2014 Jul: R/V Oceanus; Newport, OR to Newport. Deployment of 24 OBS.

10) 2014 May: R/V Oceanus; Newport, OR to Newport. Recovery of 21 OBS.

11) 2014 Apr: R/V Endeavor; N Kingstown, RI to Narragansett, RI. Deployment of 30 OBS.

12) 2013 Sep: R/V Oceanus; Newport, OR to Newport. Recovery of 30 OBS.

13) 2013 May - Jun: R/V Oceanus; Newport, OR to Newport. Recovery of 23 OBS.

14) 2013 Jul - Aug: R/V Oceanus; Newport, OR to Newport, OR. Deployment of 23 OBS.

15) 2013 Dec: R/V Connecticut; Woods Hole to Woods Hole. Recovery of 12 and redeployment of 5 OBS.

16) 2013 Sep: R/V Tioga WHOI to WHOI. Recover 4 short period OBS instruments.

17) 2012 Jan – Feb: R/V Thompson (WU) Guam to Guam. Technical Lead, deploy 28 short period OBS instruments, 15 instruments were moored/tethered.

18) 2012 Nov – Dec: R/V Connecticut (UCONN) WHOI to WHOI. Technical Lead, recover 12 and deploy an additional 5 short period OBS instruments.

19) 2012 Sep - Oct: R/V Melville; San Diego to San Diego. Deployment of 30 OBS.

20) 2012 Aug - Sep: R/V Oceanus; Newport, OR to Newport. Deployment of 25 OBS.

21) 2012 May: R/V Oceanus; Newport to Newport. Recovery of 25 OBS.

22) 2011 Nov: R/V Wecoma; Newport to Newport. Deployment of 25 OBS.

23) 2011 Jul – Aug: R/V Kilo Moana (UHMC) Oahu Hawaii to Oahu Hawaii. Recover 12 short period OBS instruments.

24) 2011 Jul: Norsemen II, Kodiak Alaska to Kodiak Alaska. Technical lead, deployment of 12 short period OBS

25) 2011 Jun – Jul: R/V Wecoma (OSU). Newport to Newport. Recover 10 broadband OBS instruments.

26) 2011 Jun: R/V Wecoma; Newport to Newport. Recovery of 10 OBS.

27) 2010 Nov – Dec: R/V Kilo Moana (UHMC), Oahu, Hawaii to Oahu, Hawaii. Recover 30 broadband OBS instruments.

28) 2010 Sep: R/V Kilo Moana (UHMC) Technical Lead. Oahu, Hawaii to Oahu, Hawaii. Deploy 12 short period OBS instruments.

29) 2009 Oct – Nov: R/V Roger Revelle; Tonga to Fiji. Deploy 31 OBS.

30) 2009 Jan – Mar: R/V Marcus Langseth; Fiji to Tonga. Deployment and recovery of 60 short period OBS