

CURRICULUM VITAE

Maximilian D. Cremer

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Qualifications

- 10/13: ROV Pilot, SOEST Marine Operations
- 12/03: Submersible Pilot, Hawaii Undersea Research Lab (HURL)
- 05/94: MS, Oceanography, SOEST, University of Hawaii
- 08/88: BS Equivalent, Marine Geology, Geologisch-Paläontologisches Institut and Institut für Meereskunde, Christian-Albrechts-Universität, Kiel, Germany
- 09/87: Vordiplom, Geology, Rheinische-Friedrich-Wilhelms-Universität, Bonn, Germany

Professional History

1. Positions

- 06/18 – present: **Assistant Specialist:** Deputy Director, SOEST Ocean Technology Group (OTG)
- 01/16 – present: **Assistant Specialist:** Senior Submersible Pilot, *PISCES IV* and *PISCES V*;
ROV Operational Lead, DOER H6000 *LU'UKAI* system, SOEST Marine Operations.
- 10/13 – 12/15: **Assistant Specialist:** ROV Pilot and Maintenance Coordinator, DOER H6000 *LU'UKAI* system, SOEST Marine Operations.
- 03/13 – present: **Assistant Specialist:** Operations Manager and Co-PI, Makai Pier Test Facility, SOEST.
- 12/03 – present: **Assistant Specialist:** Deputy Director of Operations, Submersible Pilot, *PISCES IV* and *PISCES V*, HURL.
- 03/00 – 12/03: **Assistant Specialist:** Submersible Operations Support, Maintenance Supervisor, Science Diver, Surface Director, Submersible Co-pilot, HURL.
- 07/98 – 02/00: **Junior Specialist:** Submersible Support Technician; HURL.
- 01/96 – 06/98: **Junior Specialist:** Manager, Radioanalytical Facility; SOEST Oceanography.
- 06/94 – 12/95: **Graduate Research Assistant:** Laboratory Technician; SOEST Radioanalytical Facility.
- 01/89 – 5/94: **Graduate Research Assistant:** Hawaii Undersea Research Lab.
- 08/88 – 12/88: **Teaching Assistant:** UH Oceanography.

2. Operational Experience

- 07/98 – present: ***PISCES IV* and *V* Manned Submersibles:** Pilot and Co-Pilot on 289 dives (1904 hrs submerged). A total of 850+ successful deep submergence missions as part of the HURL Operations Team, starting in July 1998.
Submersible Launch-Recovery-Transport barge (LRT): Pilot and Support Diver, 40+ LRT dives in 2013 and 2016.
ROV *LU'UKAI*: Pilot and Operational Lead, 104 dives, 660 hours submerged since late 2013.
ROV *HERCULES/ARGUS*: *ARGUS* Pilot and Maintenance Technician, about 15 dives in 2014 operating from Ocean Exploration Trust's *E/V NAUTILUS*.
Mission Locations: Kermadec Back Arc; Tonga Back Arc; Samoan Hot Spot, including Rose Atoll; Line Islands, including Palmyra, Kingman Reef and Jarvis; Southern Emperor Seamounts; NW Hawaiian Islands, including Midway and Kure Atoll; All main Hawaiian Islands, including Loihi Seamount; Geologists Seamounts; Clarion-Clipperton Fracture Zone; Gulf of Mexico.

Operational Experience (cont.)

Major System Refits:

Six (6) ABS Special Surveys (complete refits) of *PISCES IV* submersible.

Six (7) ABS Special Surveys (complete refits) of *PISCES V* submersible.

One (1) Complete refit of DOER H6000 *LU'UKAI* ROV

10/96 and 09/97: **Shipboard Radiochemistry:** Deep submergence expeditions to Loihi Seamount; Deployment and recovery of *in situ* ^{222}Rn and temperature sensor package; concurrent shipboard ^{222}Rn analyses of hydrothermal fluids; Shipboard analyses of ^{222}Rn activities in hydrothermal fluids and plume hydrocasts in response to the July/August '96 seismic crisis on Loihi Seamount.

08/92: **GA Technical Support:** FLANK-FLUX '92, Juan de Fuca Ridge; Operation of towed deep-sea camera system for visual support of geochemical data sets.

02/90 and 10/91: **MS Thesis Field Work:** Deep submergence expeditions with HURL's *PISCES V* and *MIR I* of the Russian Academy of Science; Geochemical and radiochemical investigation of hydrothermal deposits in the neo-volcanic zone of Loihi Seamount.

Laboratory Expertise (practiced until 06/98)

Operation, maintenance and continuous upgrade of High Purity Germanium (HPGe) gamma-ray detection systems, Sodium-Iodide (NaI) gamma-ray detection systems, and alpha-spectrometry systems. Sample preparation, including trace metal purification and isotope dilution procedures for the extraction and isolation of uranium-series and other radioisotopes. Management and maintenance of large data bases. Supervision and instruction of graduate student interns and hired laboratory assistants. Active participation in grant writing, preparation of feasibility studies, and progress and final project reports. Implementation of new field applications involving measurement of natural and artificial radioisotopes, in particular ^{222}Rn , and other geochemical parameters. Design and development of multi-parametric sensor packages for *in situ* monitoring of extreme environments.

Publications

Delgado J.P., Kerby T., Price S., **Cremer M.D.**, Van Tilburg H.K., Varmer O., Matthews R. (2016) *The Lost Submarines of Pearl Harbor: The Rediscovery and Archaeology of Japan's Top-Secret Midget Submarines of World War II*. Texas A&M University Press, 240pp., ISBN-10: 1623494664, ISBN-13: 978-1623494667

Brown A. and **Cremer M.D.** (2016) *Cable Assemblies for Manned Research Sub*. Sea Technology, July 2016 Issue.

Sedwick P.N., Harris P.T., Robertson L.G., McMurtry G.M., **Cremer M.D.** and Robinson P. (2001) *Holocene sediment records from the continental shelf of Mac. Robertson Land, East Antarctica*. Paleoceanography 16(2):212-225.

Gauldie R.W. and **Cremer M.D.** (2000) *Confirmation of ^{222}Rn loss from otoliths of Orange Roughy, Hoplostethus Atlanticus*. Fisheries Science 66(5):989-991

McMurtry G.M., Herrero-Bervera E., **Cremer M.D.**, Resig J., Sherman C., Smith J.R. and Torresan M.E. (1999) *Stratigraphic constraints on the timing and emplacement of the Alike 2 giant Hawaiian submarine landslide*. JVGR 94:35-58

Gauldie R.W. and **Cremer M.D.** (1998) *Loss of ^{222}Rn from otoliths of Orange Roughy, Hoplostethus Atlanticus, invalidates old ages.* *Fisheries Science* 64(4): 543-546

Smith C.R., Levin L.A., McMurtry G.M. and **Cremer M.D.** (1998) *Bioturbation, benthos and oxygen in the Arabian Sea: Linking seafloor ecology and sediment geochemistry.* In: *Benthic Processes in the Deep Arabian Sea*, Int. Conf. Proceed., The Royal Society of Edinburgh, Scotland, UK

Sedwick P.N., Harris P.T., Robertson L.G., McMurtry G.M., **Cremer M.D.** and Robinson P. (1998) *A geochemical study of marine sediments from the Mac. Robertson Shelf, East Antarctica: Initial results and paleoenvironmental implications.* *Annals of Glaciology* 27:268-274

Publications (cont.)

McMurtry G.M. and **Cremer M.D.** (1997) *In situ monitoring of dissolved radon and other chemical species on Loihi Seamount, Hawaii.* *Geol. Soc. Am.*; Abstr. with programs 29:53

Publications (cont.)

Duennebier F.K., N.C. Becker, J. Caplan-Auerbach, D.A. Clague, J. Cowen, **M. Cremer**, M. Garcia, F. Goff, A. Malahoff, G.M. McMurtry, B.P. Midson, C.L. Moyer, M. Norman, P. Okubo, J.A. Resing, J.M. Rhodes, K. Rubin, F.J. Sansone, J.R. Smith, K. Spencer, Xiyuan Wen, C.G. Wheat (1997) *Researchers rapidly respond to submarine activity at Loihi Volcano, Hawaii.* *EOS Trans. Amer. Geophys. Union* 78(22):229-233

Cremer M.D. and McMurtry G.M. (1996) *The Hawaii Chemical Monitoring Station: A seafloor observatory for long term, in situ monitoring of hydrothermal venting on Loihi Seamount, Hawaii.* 1996 fall meeting of the American Geophysical Union, Abstract.

McMurtry G.M., Herrero-Bervera E., **Cremer M.D.** and Smith J.R. (1996) *Radiochemical and paleomagnetic stratigraphy of the Alika 2 submarine landslide, Hawaii, and their bearing on the giant wave hypothesis.* 1996 fall meeting of the American Geophysical Union, Abstract.

Cremer M.D. (1994) *Geochemistry of hydrothermal deposits from the summit region of Loihi Seamount, Hawaii.* MS Thesis, University of Hawaii, UMI Press.

Sharma P., McMurtry G.M. and **Cremer M.D.** (1994) *Growth history of a hydrogenetic ferromanganese crust from the Pacific Ocean.* 1994 spring meeting of the American Geophysical Union, Abstract.