



海のフロンティアを拓く  
岡村健二賞

Kenji Okamura Memorial Award  
for Pioneering the Ocean Frontier

2018

## 「海のフロンティアを拓く岡村健二賞」創設趣意

テクノオーシャン・ネットワーク(TON)では、岡村健二氏のご遺志を継ぐ事業の一つとして、ご遺族のご芳志をいただき、同氏が所属されていた三菱重工業株式会社のご厚意のもと、2010年に「海のフロンティアを拓く岡村健二賞」を創設いたしました。

故岡村健二氏は、日本の海洋開発について、先行的・共通的技術開発の必要性、重要性を強調され、海洋科学技術センター(現JAMSTEC)の設立および初代理事の一人として機器開発や深海研究の実施に積極的に取り組まれました。これは国家プロジェクトである有人潜水艇「しんかい2000」や「しんかい6500」の実現につながりました。また、海洋技術の先進国である米国を目標にわが国の海洋工学の向上に腐心され、わが国の海洋関係者に米国の技術レベルとわが国のそれとをしっかりと認識することの重要性を常に考えられ、米国で毎年開催される海洋国際コンベンションであるOCEANSやROV International(現Underwater Intervention)等を日本に誘致することを考えておられました。その夢は、岡村氏が物故された後、ようやく2004年にNOAA長官を基調講演に招いたTechno-Ocean / OCEANS 2004として実現したわけです。また、同氏は、技術者として世界トップクラスの高速ディーゼル機関を開発、完成させたディーゼル機関の国際的権威者でもあります。

このように、技術者として常に新しい技術への挑戦を続け、国際的視野に立ち、先見の明をもたれた岡村健二氏は、海洋立国日本の発展のためにご活躍され、多大なるご貢献をされました。

そこで、TONでは、2010年のTechno-Ocean開催を機に、岡村健二氏の社会的功労を偲び、学術的功績を讃え、「海のフロンティアを拓く岡村健二賞」を創設し、同氏の遺志を継ぐわが国の若い研究者・技術者に対して、これを贈呈することといたしました。

## 岡村健二氏 プロフィール

大正元年12月8日長岡市にて出生。昭和9年東京帝国大学工学部卒業後、同年三菱航空(株)入社。昭和39年社名改称により三菱重工業(株)転籍。本社技術本部技術管理部長、同社技術本部長代理等の要職を経た後、昭和62年1月まで同社技術本部顧問。昭和39年5月より菱日エンジニアリング(株)取締役、三菱開発(株)常務取締役、菱和海洋開発(株)取締役社長を歴任。昭和46年海洋科学技術センター理事、昭和61年同顧問。昭和50年国際海洋資源工学委員会(ECOR)会長。昭和26年米国Naval Academyから「船用高性能ディーゼル機関の開発」でPhDを授与。昭和30年紫綬褒章、昭和55年第一回MTS国際賞、昭和58年勲三等瑞宝章、昭和62年国際燃焼機関会議ゴールドメダルなどを受賞。平成元年1月15日逝去。

## “Kenji Okamura Memorial Award for Pioneering the Ocean Frontier” Founding Statement

The Techno-Ocean Network (TON) established the Kenji Okamura Memorial Award for Pioneering the Ocean Frontier in 2010. This award is one of a number of projects conducted in accordance with the wishes of the late Dr. Kenji Okamura with the kind consent of his bereaved family and through the courtesy of Mitsubishi Heavy Industries Ltd., the company for which he worked for many years.

With respect to Japanese marine development, the Dr. Okamura laid a strong emphasis on the necessity and importance of pursuing advanced and unified technological development. Dr. Okamura was actively involved in developing equipment and conducting deep-sea research as one of the founding directors of the Japan Marine Science and Technology Center (the forerunner organization of the present Japan Agency for Marine-Earth Science and Technology (JAMSTEC)). His work was closely linked with the achievement of the national projects to develop the manned deep-sea submergence research vehicles “SHINKAI 2000” and “SHINKAI 6500”. Dr. Okamura also made every effort to raise Japan’s ocean engineering to a level matching that of the United States, which possessed the world’s most advanced ocean technology. He always considered it extremely important that those working in ocean-related fields in Japan had a clear grasp of the technological levels in both the US and in Japan, and to this end he paid consideration to attracting international marine conventions to Japan such as OCEANS and ROV International (the present Underwater Intervention), which are held annually in the US. This dream was finally realized in 2004, after his death, with the holding of Techno-Ocean/OCEANS 2004, to which the President of the NOAA was invited as a keynote speaker. Furthermore, Dr. Okamura was an acknowledged international expert on diesel engines who developed and perfected one of the world’s top-class high-speed diesel engines.

In ways such as these, Dr. Okamura continually rose to the challenge of developing new technology. He possessed a foresight that rested on a global viewpoint, played an active role in developing Japan as an ocean state, and made numerous contributions to the advance of technical knowledge.

Taking advantage of the opportunity presented by the holding of Techno-Ocean 2010, TON established the Kenji Okamura Memorial Award for Pioneering the Ocean Frontier in commemoration of Dr. Okamura’s services to society and in celebration of his academic achievements. This award is presented to young Japanese researchers and engineers who are judged to be working innovatively in the ocean field in accordance with his wishes.

## Kenji Okamura — Profile

Dr. Kenji Okamura was born in Nagaoka City on December 8, 1912. He graduated from the Engineering Department of Tokyo Teikoku University (the present Tokyo University) in 1934 and joined Mitsubishi Aircraft Company in the same year. In 1964, in line with a change of company name, he was transferred to Mitsubishi Heavy Industries, Ltd. After holding important posts such as Technology Management Manager and later Acting Manager at the Head Office Technology & Innovation Headquarters, he served as an advisor to the Technology & Innovation Headquarters until January 1987. From May 1964 he also held several other prominent positions such as Director of Ryonichi Engineering Co., Ltd., Executive Managing Director of Mitsubishi Kaihatsu Kabushiki Kaisha, and President and Director of Ryowa Kaiyo Kaihatsu Kabushiki Kaisha. In 1971, he became the Director of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) and subsequently served as an advisor to that organization from 1986. In 1975, he became Chairman of the Engineering Committee on Oceanic Resources (ECOR). In 1951, he was awarded a PhD by the Naval Academy for “the development of a marine high-performance diesel engine.” During his long career, he was also honored with a slew of awards including the Medal with Purple Ribbon in 1955, the First MTS International Award in 1980, the Order of the Sacred Treasure in 1983, and the International Council on Combustion Engines (CIMAC) Gold Medal in 1985. Dr. Okamura died on January 15, 1989.

2018年「海の前線を拓く岡村健二賞」受賞者



高橋 朋子

高橋朋子博士は、1,000mの深さを超えた熱水鉱物に含まれる元素成分を深海現場レーザー誘起破壊分光システム(LIBS)定量解析する新たな手法を開発した。同博士が提案した多変量解析とLIBSで生じるプラズマの物理解析を組み合わせた定量解析法は、液中プラズマの特性を深く理解した上で考案した手法で、その内容はLIBSの国際学会で高評価を得て、国際ジャーナル論文に採択された。同博士は、既に4本の国際ジャーナル論文で筆頭著者として論文を発表し、国内・国際学会でそれぞれベストプレゼンテーションアワードを受賞しており、深海LIBSプロジェクト全体の成功に大きく貢献している。

また、同博士は、基礎研究からサイエンスへの応用を意識して研究に取り組み、専門分野以外の知識や技術を積極的に取り入れ、新しい分野を切り開き、今後、さらに深海化学分析の研究分野において飛躍的な成果が期待できる。

テクノオーシャン・ネットワークは、深海化学分析の顕著な研究成果を挙げた高橋朋子博士に、我が国の深海化学分析・海洋工学の学術研究を担う人材になりうると判断し、この分野の将来を切り開く若手研究者への賞である「海の前線を拓く岡村健二賞」を贈り、これまでの顕著な業績を讃える。

“Kenji Okamura Memorial Award for Pioneering the Ocean Frontier”  
2018 Award Winner

Tomoko TAKAHASHI

Dr. Tomoko Takahashi has developed a new method of performing Laser-Induced Breakdown Spectroscopy (LIBS) quantitative analysis on the elemental composition of hydrothermal minerals at depths exceeding 1,000m. She suggested quantitative analysis that combined multivariate analysis with physical analysis of plasma by LIBS, a method she devised based on an advanced understanding of the characteristics of in-liquid plasma. This development was highly praised at the LIBS International Conference and selected for publication of articles in international journals. Already, as lead author, she has presented her paper in four international journals, and received ‘Best Presentation’ award at both domestic (Japanese) and international conferences. In so-doing she has made a significant contribution to the success of the deep-sea LIBS project as a whole.

Dr. Tomoko Takahashi has been conducting her research with an extensive field awareness ranging from basic research to applied science, actively employing knowhow and technologies from outside the regular specialist fields, and thereby developing a new one. From what we have seen of her work so far, we confidently anticipate further dramatic results coming out of the research surrounding deep sea chemical composition analysis of solids. The Techno-Ocean Network has therefore judged that Dr. Tomoko Takahashi, having achieved outstanding results in ocean chemical composition analysis, is set to become a key individual leading Japan’s academic research into deep sea chemical composition analysis of solids and ocean engineering. Therefore, we present the Kenji Okamura Memorial Award, for a young researcher who is opening the future of the field, and we recognize her impressive achievements to date.



歴代受賞者  
AWARD WINNERS

|      |                |                  |
|------|----------------|------------------|
| 2010 | 福場 辰洋          | Tatsuhiko FUKUBA |
| 2012 | 巻 俊宏           | Toshihiro MAKI   |
| 2012 | 亀山 宗彦          | Sohiko KAMEYAMA  |
| 2014 | Blair THORNTON |                  |
| 2016 | 高橋 勇樹          | Yuki TAKAHASHI   |
| 2016 | 水野 勝紀          | Katsunori MIZUNO |
| 2018 | 高橋 朋子          | Tomoko TAKAHASHI |

Techno-Ocean Network  
<http://www.techno-ocean.com>  
E-mail: [techno-ocean@kcva.or.jp](mailto:techno-ocean@kcva.or.jp)  
TEL: + 81-78-303-0029  
FAX: + 81-78-302-6475

