

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

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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

2016

「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勞を偲び、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.

2016年「海のフロンティアを拓く岡村健二賞」受賞者



高橋 勇樹

高橋勇樹博士は、CFD解析を用いたオッターボードの設計方法を確立することを目的とし、現在実際の漁業および資源調査の現場において使用されている、複葉型および縦湾曲型オッターボードを対象に、CFD解析の精度を検証するとともに、オッターボード周囲の流れ場を可視化し、流れと流体力特性の関係を明らかにした。また、設計の効率化を目指し、CFD解析を基にした形状最適化手法を提案した。その結果、従来経験的に決められていたオッターボード形状を解析的に決定することが可能となり、状況に応じた柔軟なオッターボード設計が可能となった。これら一連の研究は、広範な漁具研究・開発に新たな可能性を与えるもので、将来の省エネ・省コスト型漁業の実現に大きく貢献するものである。

テクノオーシャン・ネットワークは、水産科学の分野において、顕著な研究成果を挙げた高橋勇樹博士に、わが国の水産・海洋工学に関わる学術研究を担う人材となりうると判断し、この分野の将来を切り開く若手研究者への賞である「海のフロンティアを拓く岡村健二賞」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”
2016 Award Winner

Yuki TAKAHASHI

Dr. Yuki Takahashi has verified the accuracy of Computational Fluid Dynamics (CFD) analysis directed at biplane-type and vertical curve-type otter boards, which are currently used in actual fishery operations and in resource surveys in the field, and he has also visualized the flow field that surrounds otter boards and ascertained the relationship between the flow and fluid dynamics characteristics. This work is objected at establishing a design method for otter boards employing CFD analysis. Moreover, Dr. Takahashi has proposed a shape optimization method based on CFD analysis with the aim of increasing the efficiency of design. As a result, it has become possible to determine analytically the shape of an otter board, which conventionally had to be determined by trial and error. Dr. Takahashi's series of studies has opened up new possibilities for the research and development of a wide variety of fishing equipment and is making a substantial contribution to realizing the energy-saving and cost-saving style fisheries of the future.

Dr. Takahashi has achieved remarkable research results in the ocean science field. The Techno-Ocean Network (TON) has decided to present Dr. Takahashi with the Kenji Okamura Memorial Award for Pioneering the Ocean Frontier, an award for young researchers who are working at the forefront of ocean research, in recognition of his achievements and of his status as a talented professional who can be expected to make a continuing contribution to Japanese academic research in the fields of ocean engineering and marine science.

2016年「海のフロンティアを拓く岡村健二賞」受賞者



水野 勝紀

海底堆積層内には、深海底や沿岸域において、「埋没している鉱床(潜頭性鉱床)」や「二枚貝などの内在性生物」といった、資源量や生物生態系を考える上で極めて重要な情報が埋積しているが、その情報は未知なる部分が殆どである。

水野勝紀博士は、その堆積層内の情報を詳細に取得することの重要性を認識し、新しい音響計測技術や堆積層内における複雑な伝搬挙動を示す音波の解析手法に関する研究を先駆的に進めており、文部科学省のプロジェクトなどにおいて、潜頭性鉱床探査におけるキーテクノロジーと期待される「自律型海中ロボット(AUV)搭載用のパラメトリックサブボトムプロファイラー(PSBP)」や堆積層内の生物動態を正確にモニタリングするための「3次元音響コアリングシステム(3D-axs)」という計測技術を開発した。PSBPは、内閣府のプロジェクトにおいて開発中のAUVに搭載され、世界初の潜頭性鉱床探査機器として、今後の海底資源探査における重要な役割を担うと期待されている。また3D-axsは堆積層内の3次元精密音響画像を自動取得し、数cmの大きさの対象物を、非侵襲でその生態環境を損なうことなく計測可能であり、今後の海洋生態系環境計測に資する価値ある新技術である。

テクノオーシャン・ネットワークは、海底下の熱水系、生態系の解明に期待される新しい海洋音響技術開発研究に取り組み、顕著な研究成果を挙げた水野勝紀博士に、我が国の海洋工学・海洋科学に関わる学術研究を担う人材となりうると判断し、この分野の将来を切り開く若手研究者への賞である「海のフロンティアを拓く岡村健二賞」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”
2016 Award Winner

Katsunori MIZUNO

Within the seabed sediment, there exist some very important natural resources in the form of buried deposits as well as benthic organisms such as bivalve mollusks. However, the world just below the seabed is still far from being fully revealed.

Dr. Katsunori Mizuno recognized the importance of gathering information from within the sediment, and so he studied a number of new acoustic sensing methods and analytical techniques in order to better understand the complex propagation behavior of sound waves within the sediment. He developed the Parametric Sub-Bottom Profiler (PSBP) for Autonomous Underwater Vehicles (AUVs) to explore the buried deposits in the MEXT project and the 3D acoustic coring system (3D-axs) to monitor sediment-dwelling benthic animals. The PSBP was mounted on a new AUV, developed as part of a Cabinet Office project, and is expected to contribute to the exploration of deep-sea resources. The 3D-axs is capable of capturing 3D acoustic images in sediment with high resolution and detecting small benthic animals without destroying their habitat. This new technology will be of invaluable use in monitoring the sea environment.

Dr. Mizuno has achieved outstanding results in researching and developing a new marine acoustic technology that can be used for identifying sub-seafloor hydrothermal systems and ecosystems. The Techno-Ocean Network (TON) has decided to present Dr. Mizuno with the Kenji Okamura Memorial Award for Pioneering the Ocean Frontier, an award for young researchers who are working at the forefront of ocean research, in recognition of his achievements and of his status as a talented professional who can be expected to make a continuing contribution to Japanese academic research in the fields of ocean engineering and marine science.