

## Günther F. Clauss honored as Georg Weinblum Lecturer

Prof. Dr.-Ing. Günther Clauss has been named the 29<sup>th</sup> Georg Weinblum Memorial Lecturer (2006-2007) in recognition of the many outstanding contributions to the field of offshore technology that he has made during a very successful career in education and scientific research. This international Lecturership was established to honor individuals who exemplify the spirits and ideals of Georg P. Weinblum. The lecture series was inaugurated in 1978 by a group of German and American scientists and friends of the late Georg Weinblum, in continuing the tribute to his many invaluable contributions to the field. The Memorial Lecture is presented each year by an internationally recognized authority and is sponsored in Germany by Institut für Schiffbau of the University of Hamburg and in the United States by the Society of Naval Architects and Marine Engineers and the Naval Studies Board of the National Research Council. The lecturers are chosen by a Selection Committee representing the Institut für Schiffbau, the Fachausschuss Schiffhydrodynamik der Schiffbautechnischen Gesellschaft, and the *Journal of Ship Research* Committee and Analytical Ship Wave Relation Panel (H-5) of the Society of Naval Architects and Marine Engineers. The lectures are offered for publication in the *Journal of Ship Research* or *Schiffstechnik*. The inauguration lecturer in 1978 was Professor John Wehausen, Emeritus, University of California at Berkeley.

### The Taming of the Shrew – Tailoring Freak Waves for Seakeeping Tests Günther F. Clauss, Technical University Berlin, Germany

Hamburgische Schiffbau-Versuchsanstalt  
Bramfelder Str. 164 – 22305 Hamburg  
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The National Academies  
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Günther F. Clauss, born on the 31 of December, 1939 in Munich, Germany, grew up after World War II at a Bavarian lake – and as his parents were busy to survive and feed the family he discovered as a little boy his “ocean” - building a sailing raft and cruising on the endless “sea” like a viking – before he learned to swim. He studied technical physics at the Technical Universities at Munich (B.S. – 1964) and Berlin (M.S.), and completed his doctorate at the Institute of Aerospace (TU Berlin) in the year 1968. Inspired by Professor Alfred Keil, Dean of Engineering at MIT he changed from outer space to inner space, and established – with his mentor Professor Claus Kruppa – the new field ‘ocean engineering’ at the Technical University Berlin. After his habilitation – a postgraduate degree – he became professor of Ocean Engineering in 1972, and – after research visits at the MIT-Department of Ocean Engineering (under the guidance of Prof. Alfred Keil), the Institute of NAOE, University of California at Berkeley,

and the Indian Institute of Technology, Madras he was offered the first Chair of Ocean Engineering in Germany at the TU Berlin in 1973. For many years he served as a Director of the Institute of Naval Architecture and Ocean Engineering, three legislative periods he was the Dean of the Faculty of Mechanical Engineering and Transport Systems and 12 years Senator at the Academic Council.

The extensive research activities of Günther Clauss - focussing on the design and hydromechanics of offshore structures as well as on deep sea technology – cover projects on capsizing of ships, design and optimization of offshore platforms, pipelaying vessels and floating cranes as well as the development of oil skimming vessels, deepsea shuttles and ocean mining systems. For the deterministic analysis of cause-reaction chains he developed a seakeeping test procedure which uses tailored extreme waves – embedded in irregular seas – to investigate precisely wave/structure interactions – a technique which is based on the fundamental work of Davies and Zarnick as well as Takezawa and Hirayama. With his research assistants, colleagues and industry partners he published more than 200 papers <http://ism.cadlab.tu-berlin.de/MT/publikationen/publikationen-mainframe.html> (‘best paper award’ OMAE 2006) as well as the books ‘Meerestechnische Konstruktionen’ (also in Korean) and ‘Offshore Structures’ (Vol I – Conceptual Design and Hydromechanics, Vol II – Strength and Safety for Structural Design). Under his guidance more than 25 Ph.D. theses have been successfully completed – based on research projects of the European Union, the German Ministry of Research and Development (BMBF), the German Science Foundation (DFG) and the Association of Industrial Partners. Günther Clauss served as chairman and member at ITTC and ISSC, is member of STG (executive board), RINA (F) and SNAME (M). He received the KERN-Maritime Technology Award in 2005, and is specially honored by this nomination as the Georg-Weinblum-Memorial Lecturer 2006/2007.

## Georg P. Weinblum



Georg Weinblum began his lifelong work on ship hydrodynamics as a student in St. Petersburg. He completed his studies in Danzig and in 1921 he joined the Technical University of Berlin, where he became a professor, and worked part of the time at the Preussische Versuchsanstalt für Wasserbau und Schiffbau. He left in 1938 to become a director of a firm engaged in the development of hydrofoil boats. In 1943 he became a professor of naval architecture at the Technical University of Danzig. After the war he worked for the British Admiralty for a year, and from 1948-1952 he worked at the David Taylor Model Basin in the USA. In 1952 he became director of the Institut für Schiffbau at the University of Hamburg, where he worked for the rebirth of German research and education in naval architecture. At the same time he was a professor at the Technical University of Hanover.

Georg Weinblum's important scientific contributions covered several aspects of ship hydrodynamics: wave-resistance theory, maneuvering, ship motions, and hydrofoils. Throughout his work he exploited theory to discover what useful information it could give for ship design. This began with an investigation of ships of minimum wave resistance for his doctoral dissertation in 1929 and an early recognition of the importance of analytical representations of ship hulls. In other

pioneering research he correctly stressed the importance of considering hydrodynamic, in addition to hydrostatic, forces when evaluating ship motions in a seaway.

For those privileged to have worked with Georg Weinblum, the effect of his enthusiasm, scholarship, and encouragement was profound and lifelong. He inspired a conviction that problems of ship theory are important and solutions within grasp. In addition, he cared not only about the theories but also the people who made them.

## Georg Weinblum Lecturers

2006-2007	<b>Günther F. Clauss</b> , Berlin/Germany	The Taming of the Shrew – Tailoring Freak Wave Sequences for Seakeeping Tests
2005-2006	<b>Rodney Eatock Taylor</b> , Oxford/UK	On Modelling the Diffraction of Water Waves
2004-2005	<b>Makoto Ohkusu</b> , Yokosuka/Japan	Hydrodynamics of Wave-Body Interaction Based on the Observation of Diffraction and Radiation Wave Pattern
2003-2004	<b>Maurizio Landrini</b> , Rome/Italy	High Nonlinear Phenomena in Ship Hydrodynamics
2002-2003	<b>Ronald W. Yeung</b> , Berkeley/USA	Modelling Viscosity Effects in Surface-Wave Problems
2001-2002	<b>Hideaki Miyata</b> , Tokyo/Japan	Towards Virtual Reality by Computational Physics
2000-2001	<b>Francis Noblesse</b> , Bethesda/USA	Analytical Representations of Ship Waves
1999-2000	<b>Bernard Molin</b> , Marseilles/France	Numerical and Physical Wavetanks: Making them Fit
1998-1999	<b>Aad J. Hermans</b> , Delft/The Netherlands	The Role of Applied Mathematics in Hydrodynamics for Ships Floating Offshore Structures
1997-1998	<b>Heinrich Soeding</b> , Hamburg/Germany	Limits of Potential Theory in Rudder Flow Predictions
1996-1997	<b>Justin E. Kerwin</b> , Cambridge/USA	Experiences in Modeling and Computing Flows with Lift
1995-1996	<b>Lars A. Larsson</b> , Gothenberg/Sweden	CFD in Ship Design - Prospects and Limitations
1994-1995	<b>Touvia Miloh</b> , Tel Aviv/Israel	Ship Motion in Non-homogeneous Media
1993-1994	<b>Masatoshi Bessho</b> , Tokyo/Japan	Consistent Linearized Theory of Wave-making Resistance of Ships
1992-1993	<b>Odd M. Faltinsen</b> , Trondheim/Norway	On Seakeeping of Conventional and High-Speed Vessels
1991-1992	<b>John Pershing Breslin</b> , Hoboken/USA	Induced Effects on Propeller Inflows
1990-1991	<b>Ernest Oliver Tuck</b> , Adelaide/Australia	Ship-Hydrodynamic Free-Surface Problems Without Waves
1989-1990	<b>Karl Wieghardt</b> , Hamburg/Germany	A Characteristic of Three-Dimensional Turbulence
1988-1989	<b>John Nicholas Newman</b> , Cambridge/USA	The Numerical Towing Tank - Fact or Fiction?
1987-1988	<b>Hajime Maruo</b> , Yokohama/Japan	Ship Motion in Non-homogeneous Media (in the Presence of Density Stratification and over Muddy Bottoms)
1986-1987	<b>Som Deo Sharma</b> , Hamburg/Germany	On the So-Called Memory Effects in Ship Hydrodynamics
1985-1986	<b>Fritz J. Ursell</b> , Manchester/England	Mathematical Observations on the Method of Multipoles
1984-1985	<b>Marshall P. Tulin</b> , Santa Barbara/USA	Surface Waves from the Ray Point of View
1983-1984	<b>Theodore Y. Wu</b> , Pasadena/USA	The Shallow Water Effects - Do Steady Disturbances Always Result in Steady Responses?
1982-1983	<b>George E. Gadd</b> , Feltham/England	Some Effects of Scale in Ship Model Testing
1981-1982	<b>Louis Landweber</b> , Iowa City/USA	Interactions between Viscosity and Ship Waves
1980-1981	<b>Takao Inui</b> , Tokyo/Japan	From Bulbous Bow to Free Surface Shock Wave - Twenty Years' Trend of Research on Ship Waves at the Tokyo University Tank
1979-1980	<b>Otto Grim</b> , Hamburg/Germany	Propeller and Vane Wheels as Possible Propulsion Device for Ships
1978-1979	<b>John V. Wehausen</b> , Berkeley/USA	Ship Theory, Ship Design and Georg Weinblum. Transient Phenomena Observed in Passage over Obstructions