

# Prof.Dr. Volker Bertram

Futureship GmbH, Hamburg



Volker Bertram, Naval Architect, author of two textbooks:  
Practical Ship Hydrodynamics, Ship Design for Efficiency and Economy. His recent interests :  
the whole range of environmental aspects of ships and shipping.  
( C.V. <http://www.uni-due.de/IST/bertram2.shtml> )

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## CURRICULUM VITAE

### Volker Bertram

16.04.1960	born in Hamburg, Germany
07.06.1978	Abitur at Herder Highschool, Rendsburg
01.07.1978 - 31.12.1979	Internship at shipyard Nobiskrug, Rendsburg
02.04.1979 - 30.06.1980	mandatory military service
17.03.1980 - 31.08.1983	study of naval architecture in Hamburg
05.09.1983 - 17.08.1984	study of naval architecture at University of Michigan work as research assistant CAD for Prof. Klaus Beier degree <b>M.S.E.</b>
12.10.1984 - 28.08.1985	study of naval architecture in Hamburg degree <b>Diplom-Ingenieur</b>
01.09.1985 - 31.12.1990	collaborator of Prof. Söding and Prof. Keil (IfS)
12.07.1990	<b>Dr.-Ing.</b> of the Institut für Schiffbau (IfS)
01.02.1991 - 31.07.1991	associate at McKinsey&Co.
01.08.1991 - 31.03.1993	researcher at HSVA
01.04.1993 - 30.09.1999	assistant professor (ship design) at IfS/TUHH
31.08.1994	<b>habilitation</b> (ship hydrodynamics) at TU Berlin

01.07.1995 - 31.12.1995	sabbatical at Mitsubishi Heavy Industries R&D Center, Nagasaki
10.07.1996	full academical professoral rights (ship hydrodynamics) at IfS.
01.06.1999 - 30.09.1999	researcher at Italian ship model basin INSEAN, Rome
01.10.1999 - 30.11.1999	visiting professor for 'Ship Design' at Danish Technical University, Lyngby
01.12.1999 - 30.06.2002	Research group manager at HSVA (7 PhDs, 4 masters)
01.06.2002	'enseignant chercheur' (tenured professor) at ENSIETA, Brest/France
31.01.2003	qualification as university professor in France
(Nr.03160126575)	
01.01.2005	<b>extraordinary professor</b> for fluid mechanics at Stellenbosch University

### Professional experience

1983 part-time job at ship design office Kölln-Jacoby, Hamburg (design of harbor tugs)

1986 consulting for IKL on submarine hydrodynamics

1987 consulting for VBD Duisburg on shallow water resistance

1988 Software development for MTG Hamburg for SWATH design

1991 management consultant for company (shipbuilding and ship owner)

1991 project engineer at HSVA (resistance and propulsion department)

1992 visiting professor at Institut Teknologi, Bandung, Indonesia

1994 consultant for Bremer Vulkan Verbund for Short Sea Shipping

1994 stability expert evaluation for capsized accident of FINN-BALTIC with Prof. Abicht

1995 manoeuvring expert evaluation for collision accident ZIM ANGLIA-BORSTEL with Prof. Söding

1995 R+D sabbatical at Mitsubishi Heavy Industries, Nagasaki

1996 expert evaluation for wake wash of SES for Blohm&Voss

1999 researcher at model basin INSEAN/Rome (basic research for trimarans hydrodynamics)

1999 project manager at Hamburg Ship Model Basin HSVA (CFD department)

### Editor of journals

Editor Ship Technology Research/Schiffstechnik  
 Co-Editor Journal Marine Science and Technology  
 Co-Editor Journal of Engineering for the Maritime Environment  
 Co-Editor Journal of Ships and Offshore Structures

### Organised conferences and summer schools

1993 summer school 'Computational Fluid Dynamics for Ships' (with Prof. Keil)

1994 Forum 'Computational Fluid Dynamics'

1994 summer school 'Current issues in ship design' (with Prof. Keil)

1995 Forum 'TEU 6000+', Hamburg

1996 11<sup>th</sup> Workshop Water Waves and Floating Bodies, Hamburg

1996 Forum 'Captain Computer', Hamburg

1998 WEGEMT school 'Expert Systems for Maritime Applications', Hamburg

1998 Forum 'Captain Computer II'

1998 1<sup>st</sup> High-Performance Marine Vehicle Conference, South Africa

1998 1<sup>st</sup> Numerical Towing Tank Symposium, Hamburg

1999 WEGEMT school 'CFD for Ship and Offshore Design', Hamburg

1999 2<sup>nd</sup> Numerical Towing Tank Symposium, Rome

2000 1<sup>st</sup> Conference Computer and IT Applications in the Maritime Industries, Potsdam

2000 Summer School Virtual Reality and AI in Design and Manufacture, Potsdam

- 2000 3<sup>rd</sup> Numerical Towing Tank Symposium, Tjarno
- 2000 Gothenburg 2000 Workshop, Göteborg (with Prof. Larsson und Prof. Stern)
- 2001 2<sup>nd</sup> High-Performance Marine Vehicles Conference, Hamburg
- 2001 WEGEMT school 'Manoeuvring and Manoeuvring Devices', Rome
- 2001 4<sup>th</sup> Numerical Towing Tank Symposium, Hamburg
- 2002 Forum 'Captain Computer IV', Brest
- 2002 3<sup>rd</sup> High-Performance Marine Vehicles Conference, Bergen
- 2003 2<sup>nd</sup> Conference Computer and IT Applications in the Maritime Industries, Hamburg
- 2003 6<sup>th</sup> Numerical Towing Tank Symposium, Rome
- 2004 3<sup>rd</sup> Conference Computer and IT Applications in the Maritime Industries, Siguenza
- 2004 7<sup>th</sup> Numerical Towing Tank Symposium, Hamburg
- 2004 4<sup>th</sup> High-Performance Marine Vehicles Conference, Rome
- 2005 4<sup>th</sup> Conference Computer and IT Applications in the Maritime Industries, Hamburg
- 2007 6<sup>th</sup> Conference Computer and IT Applications in the Maritime Industries, Cortona
- 2007 10<sup>th</sup> Numerical Towing Tank Symposium, Hamburg
- 2008 7<sup>th</sup> Conference Computer and IT Applications in the Maritime Industries, Liege
- 2009 8<sup>th</sup> Conference Computer and IT Applications in the Maritime Industries, Budapest

### **Publications**

More than 250, largely on ship design, ship hydrodynamics, IT for ships, environmental aspects of ships

One book on ship design with Prof. Schneekluth. (1998), One book on ship hydrodynamics (2000)

### **Awards and scholarships**

- 1983 Fulbright scholarship
- 1984 Veith-Berghoff scholarship
- 1989 Scholarship of Studienstiftung des deutschen Volkes
- 1991 Kurt-Hartwig-Siemers award for best PhD thesis of Hamburg
- 1991 Silver medal of Werner-von-Siemens-Stiftung for PhD thesis
- 1994 2. price in international competition "Futuristic Ship Design for Short Sea Shipping"  
(with master student J. Kohnagel)
- 1995 Silver medal of Kyushu University

### **Awards for students under my supervision**

- 1994 1. price of association of German engineers (VDI) Hamburg for Diplom-thesis Kohnagel (1500 Euro)
- 1998 2. price of association of German engineers (VDI) Hamburg for Kaeding (750 Euro)
- 1999 1. price design competition 'Futuristic cruiseship' of HDW (5000 Euro)
- 2002 price for the best diploma thesis of TUHH for Lindenau (1300 Euro)

### **Teaching experience**

- ,Descriptive geometry'
- ,Technical English'
- ,Management for Naval Architects'
- ,Ship seakeeping I+II (with Prof. Söding)
- ,Manoeuvring of ships (with Prof. Söding)
- ,Economics and Environmental Performance of Ships'
- 'Seakeeping of ships and offshore structures'
- ,Basics of ship manufacturing and ship structural design'
- 'Ship structures'
- 'Ship manoeuvring'
- 'Ship stability' (with Dr. Laurens)

'Engineering fluid mechanics' (with Drs. Kerampran, Grosjean, Laurens)

Diverse teaching units in summer schools on expert systems, CFD, optimization, antifouling, ship production, ship structural design, ship design, tugs, manoeuvring, ship types, ship safety

### **Involvement in PhD committees**

Evaluation for Dr. Pekka Ruponen, Helsinki Technical University (2007)  
"Progressive Flooding of a Damaged Passenger Ship"

Thesis director for Dr. Adrian Constantinescu, University of Western Brittany (2006)  
"Modélisation 2D de l'impact d'une structure sur l'eau – Initialisation de l'endommagement"

Committee member for Dr. Pierre Debaillon, TU Compagnie (2005)  
"Système de modélisation de l'enfoncement dynamique des bateaux"

Opponent for Dr Bastiaan Veelo, Norwegian University of Science and Technology, Trondheim (2004)  
" Variations of Shape in Industrial Geometric Models"

Evaluation for Dr. Juha Schweighofer, Helsinki Technical University (2003)  
"Investigation of Two-dimensional Transom Waves using Inviscid and Viscous Free-Surface Boundary Conditions at Model- and Full-Scale Ship Reynolds Numbers"

Committee member for Dr. Jean-Marc Laurens, UBO, Brest (2003)  
"Comportement hydrodynamique d'un gouvernail travaillant dans le sillage d'une helice"

Evaluation for Lars Carlsson, Chalmers University of Technology, Gøteborg (2002)  
"Towards Accurate Numerical Methods for Ship Flows on Composite Overlapping Grids"

Evaluation for Dr. Walter Hassenflug, Univ. of Stellenbosch (1997)  
"Convolution Number and its Application to Elliptic Integrals and the Schwarz-Christoffel Transformation"

Committee member for Dr. Christiane Doese, Univ. Hamburg (1997)  
"Datenmodellierung im Schiffsentwurf und Prozeßmodellierung als Grundlage für ein Concurrent Engineering"

Evaluation for Dr. Hans-Dieter Ehrenberg, Univ. Hamburg (1996)  
"Verhalten von Luftkissenkatamaranen (SES) im Seegang"

Committee member for Dr. Pierre Sames, Univ. Hamburg (1996)  
"Ein Beitrag zur Berechnung turbulenter Schiffsumströmungen"