
Curriculum Vitae for Bo Cerup-Simonsen May 2014

Personal

Name: Bo Cerup-Simonsen
Profession: Ph.D., M.Sc. Eng. (Mech. Eng., Naval Architecture), MBA
Birth: April 28, 1968 in Egved, Denmark
Sex, Nationality: Male, Danish
Family: Two children (born 1999 and 2002)
Private Address: Linde Alle 7, DK-3050 Humlebæk, Denmark
Private Phone: (+45) 21 78 94 03
Address at work: Maersk Maritime Technology, A.P. Moller Maersk A/S, Esplanaden 50, DK-1098 Copenhagen K, Denmark
Email at work: Bo.Cerup-Simonsen@Maersk.com
Email private: bocesim@gmail.com

Employment

Aug 08 – Pt Head Maersk Maritime Technology, Vice President, A.P. Moller Maersk A/S, Esplanaden 50, DK-1098 Copenhagen K, Denmark
Nov 07 – Aug 08 Research and Development Programme Head; Maritime Environmental Technology and Service Development Programme, DNV Maritime, Det Norske Veritas, N-1322 Høvik, Norway
Jan 05 – Nov 07 Head of Department: Maritime Technical Consultancy, DNV Maritime (MTPNO360), Det Norske Veritas, N-1322 Høvik, Norway
Aug 03 – Dec. 04 Head of Section: Hydrodynamics and Structures (MTPNO361), Det Norske Veritas, N-1322 Høvik, Norway
Sep 02 – Aug 03 Head of Section: Section of Maritime Engineering, Department of Mechanical Engineering, Technical University of Denmark
Jun 00 – Aug 03 Associate Professor (Naval Architecture) at the Department of Mechanical Engineering, Maritime Engineering, Technical University of Denmark.
Jun 97 – May 00: Assistant Professor at the Department of Naval Architecture and Offshore, Technical University of Denmark.
Sep 93 - Feb 97: Ph.D. student at the Department of Naval Architecture and Offshore Engineering, Technical University of Denmark.
Jan 96 - Nov 96: Substitute for an Associate Professor at the Technical University of Denmark.
Jan 95 - Jul 95: Research Engineer in the Tanker Safety Team at MIT, Cambridge, USA.
Jan 91 - Jul 91: Trainee in LICEngineering (upheaval buckling of offshore pipelines, vibrations of marine risers, buckling of offshore conductors).
Jun 90 - Jul 90: Engineer trainee on the container ship m/s Selandia with EAC A/S (ØK).
Sep 89 - Jun 90: Research assistant at Dept. of Mechanical Engineering, Technical University of Denmark
Jan 89 - Dec 92: Teaching assistant at Technical University of Denmark in various courses, e.g. "Machine elements", "Mechanics" and "Physics".

Education

Oct 07 – Aug 09	Executive MBA in Shipping and Logistics (the <i>Blue MBA</i>), Copenhagen Business School, Denmark
Apr – Aug 06	Leadership and management course, IMD, “DNV Port 2” training modules over several weeks, Lausanne/Switzerland and Høvik/Norway
Jan 02 – Jul 02	Visiting scholar (Fulbright) at UC Berkeley, California, USA
Sep 93 – Feb 97	Ph.D. Student at Department of and Naval Architecture and Offshore Engineering, Technical University of Denmark.
Jan 95 - Jun 95	Research engineer at the Department of Ocean Engineering, Massachusetts Institute of Technology (MIT), Cambridge, USA. Involved in the Joint MIT-Industry Program on Tanker Safety conducted by Prof. Tomasz Wierzbicki.
Sep 93	Graduated M.Sc. (Mech. Eng.) in Naval Architecture and Offshore Engineering, Technical University of Denmark.
Sep 91 – Jun 92	Fulbright Scholar Graduate Student (Mech. Eng.) at the University of Washington, Seattle, USA.
Sep 88 – Sep 93	Student (Mech. Eng.) at the Technical University of Denmark.

Scholarships and Distinctions

2012	<i>Maersk Maritime Technology</i> awarded <i>Maersk Business Unit of the Year</i> together with Maersk Procurement and Maersk Oil Trading
2008	Awarded the <i>Weilbach Award</i> ; ‘ <i>the highest recognition for production and communication of new knowledge in the Maritime Sector</i> ’
2005-2008	<i>DNV Fellow in Computational Mechanics</i> with corporate mandate to develop engineering applications of leading-edge methods within scientific computing, Det Norske Veritas
2006	Awarded the <i>RINA-Lloyd’s Register Ship Safety Award</i> for research and development within Risk and Safety of High Speed Craft
2001	Awarded the <i>Bronze Medal from the Royal Institution of Naval Architects</i> , RINA, London for the paper “Bottom Raking Damage to High Speed Craft”, RINA Transactions, 2000.
2001	Fulbright Scholarship for research in USA
1998	Gorm Petersens Mindelegat for outstanding research achievements.
1992	Ib Laderrieres Mindelegat for outstanding scholastic achievements.
1991	Fulbright Scholarship for studies in the USA.

Committee and Board Work

- 2013 – pt: Member of the board of Danelec A/S (Danish maritime electronics company to develop, produce, sell and service products)
- 2012 - : Member of the board of Esvagt A/S (Danish ship owning/operating company)
- 2010 - : Chairman of the Technical Committee of the Danish Shipowners’ Association
- 2008 - : Chairman of the board of Desmi Ocean Guard A/S, a company to develop, produce and deliver ballast water cleaning systems.
- 2012 - : Chairman of the Advisory Board of the Blue MBA, Copenhagen Business School, Denmark

- 2010 - : Chairman of Nordisk Søsikkerhedskomite (Nordic Safety Committee), Det Norske Veritas, Norway
- 2008 - 2010 : Member of the board of Nadiro A/S, a company to develop, produce and deliver life boat systems.
- 2008 - : Member of the Advisory Board of Mechanical Engineering at the Technical University of Denmark.
- 2009 – pt : Member of Akademiet for Tekniske Videnskaber, ATV (Academy of Technical Sciences)
- 2003 – 2008: Chairman of the Danish Accident Investigation Team for Offshore Constructions (Formand for den danske “Havarikommission for visse havanlæg”)
- 2006-2009: Member of the International Ship Structures Committee (ISSC), Technical Committee V.1 Damage Assessment after Accidental Event.
- 2007 –: Member of the Editorial Board of the Journal of Marine Structures, Elsevier Press.
- 2007 –: Member of the Editorial Board of the Journal of Marine Engineering and Technology, IMAREST, UK.
- 2006 –: Member of the Editorial Board of the Journal of Marine Science and Technology, The Japan Society of Naval Architects and Ocean Engineers, Springer Verlag.
- 2002 – 2003: Member of the board of the Danish Naval Architecture Society and the Danish Naval Architecture Foundation (medl. af bestyrelsen for Skibsteknisk Selskab og Skibsteknisk Selskabs Fond).
- 2000-2003: Chairman of the International Ship Structures Committee (ISSC), Technical Committee III.1: Ultimate Strength.
- 2001-2004: Editorial Board of Journal of Engineering for the Maritime Environment, Elsevier
- 2002-2003: : Organizing committee of World Maritime Technology Conference, to be held in San Francisco, 2003
- 2001-2004 : Scientific board of HIPER (High Performance Vehicles)
- 1999-2001: Chairman of the scientific board of the 2nd International Conference on Collision and Grounding of Ships (ICCGS01), Copenhagen, Denmark, July 2001.
- 1997-2000: Member of ISSC Technical Committee on “Ultimate Strength”.

Publications in Journals

1. B. Cerup-Simonsen, J. d. Kat, O.G. Jakobsen, L.R. Pedersen, J.B. Petersen, T. Posborg. An integrated approach towards cost-effective operation of ships with reduced GHG emissions, Proceedings SNAME Annual Meeting 2009, Submitted for journal publication.
2. B.Cerup-Simonsen, R. Törnqvist and M. Lützen. *A Simplified Grounding Damage Prediction Method and its Application to Modern Damage Stability Requirements*, Marine Structures, 22, pp. 62-83, 2009.
3. B. Cerup-Simonsen, *Accurate prediction formulas for narrow and wide grounding damages*. Submitted for journal publication, 2008

4. C. M. Rizzo, J. K. Paik, F. Brennan, C. A. Carlsen, C. Daley, Y. Garbatov, L. Ivanov, B. C. Simonsen, N. Yamamoto and H. Z. Zhuang, *Current practices and recent advances in condition assessment of aged ships*, Ships and Offshore Structures, SAOS, Vol. 2 No. 3 pp. 261–271, 2007
5. Berggreen, C., Simonsen, B. C. and Borum, K. K., “Experimental and Numerical Study of Interface Crack Propagation in Foam-cored Sandwich Beams”, *Journal of Composite Materials*, Vol. 41, No. 4, pp. 493-520, 2007
6. S. Li and B.C. Simonsen. *Meshfree Simulations of Ductile Crack Propagations*, International Journal for Computational Engineering Science, Vol. 6, pp. 1-19, 2005
7. Berggreen, C. and Simonsen, B. C., “Non-Uniform Compressive Strength of Debonded Sandwich Panels - II. Fracture Mechanics Investigation.”, *Journal of Sandwich Structures and Materials*, in press, 2005
8. B.C. Simonsen and S. Li. *Meshfree Modelling of Ductile Fracture*, International Journal for Numerical Methods in Engineering, Vol. 60, pp. 1425-1450, 2004
9. B.C. Simonsen and R. Törnqvist. *Experimental and Numerical Modelling of Ductile Crack Propagation in Large-scale Shell Structures*, Marine Structures, Vol. 17, pp. 1-27, 2004
10. P. Rigo, B.C. Simonsen, E. Lehman, T. Yao. *Ultimate Strength of Welded Aluminium Structures*, Marine Structures, Vol. 16, pp. 437-468, 2003.
11. W. Abromowicz and B.C. Simonsen. *Effect of Fracture on Crushing of Ship Structures*, Journal of Ship Research, Vol. 47, No. 3, September 2003, pp. 194-207, 2003
12. B.C. Simonsen. *Real-time Simulation of Ship Impact for Crew Training*, Marine Technology, Vol. 40, No. 4, pp. 249-257, 2003
13. P.F. Hansen and B.C. Simonsen. *GRACAT: software for grounding and collision risk analysis*. Marine Structures, Vol. 15, pp. 383-401, 2002
14. H. Naar, P. Kujala, B.C. Simonsen, H. Ludolph. *Development of Crashworthy Bottom and Side Structures*, Marine Structures, Vol. 15, pp. 443-461, 2002
15. B.C. Simonsen and L.P. Lauridsen. *Energy Absorption and Ductile Failure in Metal Sheets under Lateral Indentation by a Sphere*, International Journal of Impact Engineering, Vol. 24, pp. 1017-1039, 2000.
16. B.C. Simonsen *Bottom Raking Damage to High Speed Craft*, IMO publication 1998, Presented at RINA spring meeting 1999, RINA Transactions, Volume A, 2000, pp.41-58.
17. M. Kaminski, J. Amdahl, E. Fasano, P.A. Frieze, J.M. Gordo, P. Grundy, P.E. Hess, Y. Kawamoto, P. Kujala, J.K. Paik, U. Röhr, B.C. Simonsen, *Ultimate Strength*, Report of Committee III.I, pp. 253-323, 14th International Ship and Offshore Structures Congress 2000, Nagasaki, Japan. Published by Elsevier, pp. 255-321, ISBN: 008-043021-X

18. B.C. Simonsen and P. Friis Hansen. *Theoretical and Statistical Analysis of Ship Grounding Accidents*. Journal of Offshore Mechanics and Arctic Engineering, Vol. 122, pp. 200-207, 2000
19. B.C. Simonsen and P. Terndrup Pedersen *On Grounding of Fast Ships*, Accepted for publication in Marine Structures, 15 pages.
20. B.C. Simonsen and H. Ocakli. *Experiments and Theory on Deck and Girder Crushing, Thin-walled Structures*, Vol 34, pp. 195-216, 1999.
21. B.C. Simonsen and P.T. Pedersen *Prevention of Catastrophes at Sea, Forebyggelse af Skibskatastrofer*, In Danish, For the natural science magazine, *Naturens Verden*, September, 1998. pp. 375-384.
22. B.C. Simonsen *Ship Grounding on Rock: I Theory*, Marine Structures, Vol. 10, pp. 519-562, 1997.
23. B.C. Simonsen *Ship Grounding on Rock: II Validation and Application*, Marine Structures, Vol. 10, pp. 563-584, 1997.
24. B.C. Simonsen. *Plate Tearing by a Cone*, Int. J. Mech. Sci., Vol. 40, No. 11, pp. 1145-1158, 1998.
25. B.C. Simonsen and T. Wierzbicki. *Plasticity, Fracture and Friction in Steady State Plate Cutting*. Int. J. of Impact Engineering, Vol. 19, No. 8, pp. 667-691, 1997.
26. B.C. Simonsen and T. Wierzbicki. *Grounding Bottom Damage and Ship Motion over a Rock*. Int. J. of Offshore and Polar Engineering, Vol. 6, no. 3, pp. 195-204, Sep. 1996.
27. P. Terndrup Pedersen and B.C. Simonsen. *Dynamics of Ships Running Aground*. Journal of Marine Science and Technology, Vol. 1, No. 1, pp. 37-45, 1995.

Publications in Proceedings and Books

28. Vermeiden, J.G. et al. *A Systematic Experimental Study on Powering Performance of Flapping Foil Propulsors*, 29th symposium on Naval Hydrodynamics, Gothenburg, Sweden, 26-31 August 2012
29. Nestegård, A., Hansen, V., Rognebakke, O., Cerup-Simonsen, B., “Significant Achievements in Marine Hydrodynamics”, OMAE 2008.
30. Cerup-Simonsen, B., “Computational Mechanics to help solve the challenges of global environment and climate change”. MARINE2007, Barcelona, Spain, June 2007.
31. Cerup-Simonsen, B., “State-of-the-art report on Ship Design for Operation”, presented at International Marine Design Conference, IMDC2006, Michigan, USA.

32. Berggreen, C. and Simonsen, B. C., "Residual Strength of In-plane Loaded Debonded Sandwich Panels - Fracture Mechanical Modelling", *7th International Conference on Sandwich Structures*, 29-31 August 2005, Aalborg University, Denmark
33. Berggreen, C., Simonsen, B. C. and Törnqvist, R., "Modelling of Debond and Crack Propagation in Sandwich Structures Using Fracture and Damage Mechanics". In J.R.Vinson, Y.D.S.Rajapakse and L.A.Carlsson (eds.), *Proc. of 6th International Conference on Sandwich Structures*, Ft.Lauderdale, Florida, USA, March 31 to April 2 2003, CRC Press, Boca Raton, 682-693
34. Berggreen, C. and Simonsen, B. C., "The effect of Curvature on the Strength of Laterally Loaded Sandwich Panels", *Proceeding of The Eighth International Symposium on Practical Design of Ships and Other Floating Structures (PRADS)*, 16-21 September 2001, Shanghai, China, pp. 1323-1329.
35. B.C. Simonsen and R. Törnqvist. *A Formula for Predicting Grounding Damage with Application to Damage Stability Safety*. Proceedings of the 3rd International Conference on Collision and Grounding of Ships, ICCGS2004, Izu, Japan, pp. 34-42, 2004.
36. R. Törnqvist and B.C. Simonsen. *Safety and Structural Crashworthiness of Ship Structures; modelling tools and application in Design*. Proceedings of the 3rd International Conference on Collision and Grounding of Ships, ICCGS2004, Izu, Japan, pp. 285-294, 2004.
37. B.C. Simonsen, R. Törnqvist and M. Lützen. *A Proposal for the Extent of Bottom Raking Damage in the High Speed Code*. Proceedings of the RINA Conference on High Speed Craft Nov. 17-19 2004, Royal Institution of Naval Architects, London, UK, 2004.
38. Lützen, M., Simonsen, B.C. (2003). *Theoretical and Statistical Analysis of Ship Grounding Accidents*. Proceedings of the World Maritime Technology Conference (SNAME), WMTC2003, Washington DC, USA.
39. W. Abramowicz and B.C. Simonsen. *Crushing Strength of Ship Structures*, In *Advances in Dynamics and Impact Mechanics*, eds. C.A. Brebbia and G.N. Nurick, WIT Press, Southampton, Boston, pp. 55-86, 2003
40. C. Berggreen, B.C. Simonsen and R. Törnqvist. *Modelling of debonding and crack propagation in sandwich structures using fracture and damage mechanics*. Proceedings of the Sixth International Conference on Sandwich Structures, Ft. Lauderdale, USA, 31. March – 2. April 2003.
41. P.F Hansen, B.C. Simonsen. *Integrated Software for Risk Analysis of Shipping*, Proceedings of the 2nd International Conference on Collision and Grounding of Ships, ICCGS, Copenhagen, July 2001, pp. 1-12.
42. H. Naar, P. Kujala, B.C. Simonsen, H. Ludolph. *Development of Crashworthy Bottom and Side Structures*, Proceedings of the International Conference on Collision and Grounding of Ships (ICCGS), Copenhagen, July, 2001, pp. 179-188

43. C. Berggreen and B.C. Simonsen. *The effect of Curvature on the Strength of Laterally Loaded Sandwich Panels*, Proceeding of The Eighth International Symposium on Practical Design of Ships and Other Floating Structures (PRADS), 16-21 September 2001, Shanghai, China, pp. 1323-1329.
44. P.M. Abildgaard, P.W. Hansen. and B.C Simonsen. *Strength of Welded Aluminium Structures*, proceedings of HIPER 2001, Hamburg, May 2001, 15 pages.
45. E.S. Ravn,., J. Urban and B.C. Simonsen. *Damage and Loss of Stability for HSC in Grounding or Collision Accidents*, proceedings of HIPER 2001, Hamburg, May 2001, 15 pages.
46. M. Lützen, B.Cerup Simonsen and P.T. Pedersen. *Rapid Prediction of Damage to Struck and Striking Vessels in a Collision Event*, Proceeding of the Ship Structures Committee symposium, Washington DC, June, 2000, 12 pages
47. E.S. Ravn, B.C. Simonsen, J. Baatrup & J.J. Jensen. *Damage Stability Analysis of an HSC after Grounding*, Proceedings of IMDC2000, Korea, 2000.
48. J. Urban, P.T. Pedersen and B.C. Simonsen, *Collision Risk Analysis for HSC*, Proceedings of FAST99, Seattle, USA, August, 1999.
49. B.C. Simonsen and N.-E. Ottesen Hansen. *Protection of Marine Structures by Artificial Islands*, Proceedings of the International Symposium on Advances in Bridge Aerodynamics, Ship Collision Analysis, Operation and Maintenance, Copenhagen, May 1998, pp. 201-215.
50. P. Little, D. Pippenger and B.C. Simonsen. *Development of a Computational Model for Predicting Damage to Tankers*, Presented at the International Conference on Designs and Methodologies for Collision and Grounding Protection of Ships, San Fransisco, USA, 1996.
51. N.-E. Ottesen Hansen, B.C. Simonsen. et al. *The Ship Impact Protection of the Great Belt Suspension Bridge*, Third Symposium on Strait Crossings, 1994, Aalesund, Norway.
52. P. Terndrup Pedersen and B.C. Simonsen. *Dynamics of Fast Ships Running Aground*, NOKOS Conference, Rauma, 1995.
53. N.-E. Ottesen Hansen and B.C. Simonsen. *The Soil Mechanics of Ship Beaching*, The 24'th International Conference on Coastal Engineering, ICCE94, Kobe, Japan, 1994.

Selected Technical Reports

54. Simonsen, B.C, Lützen, M. and Törnqvist, R. *Introductory and Summary Report*, The Maritime and Coastguard Agency, UK, MCA Research Project 501, Technical Report no. 1, April, 2004.
55. Lützen, M. and Simonsen, B.C. *Representative Vessels, Structures, Materials and Grounding Scenarios*, The Maritime and Coastguard Agency, UK, MCA Research Project 501, Technical Report no. 2, April, 2004.

56. Lützen, M. and Simonsen, B.C. *Raking Experiments and Development of a Simplified Prediction Method*, The Maritime Coastguard Agency, UK, MCA Research Project 501, Technical Report no. 3, April, 2004.
57. Simonsen, B.C., Törnqvist, R. and Lützen, M. *Finite Element Modeling and Development of a Simplified Method for Prediction of Grounding Damage*, The Maritime and Coastguard Agency, UK, MCA Research Project 501, Technical Report no. 4, April, 2004.
58. Simonsen, B.C. *Proposal of Rule Formula for the Raking Damage*, Maritime Coastguard Agency, UK, MCA Research Project 501, Technical Report no. 5, April, 2004.
59. B.C. Simonsen and P.F. Hansen. *Risk Assessment of Shipping in Danish Waters related to Excavation of the Drogden Channel*, Copenhagen, December 2001.
60. J.J. Thomsen, A. Gudman and B.C. Simonsen. *Course Notes: Experimental Solid Mechanics*. Department of Mechanical Engineering, 2001
61. B.C. Simonsen *Real-time Simulation of Collision and Grounding Accidents*, Department of Mechanical Engineering, Maritime Engineering, 2000.
62. J. Urban, T. Wierzbicki, B.C. Simonsen. *Failure and Crash Response of Aluminium Cruciforms*, Impact and Crashworthiness Lab, MIT, Technical Report no 31, June 2000.
63. B.C. Simonsen. *Basic Modelling Principles and Validation of Software for Prediction of Collision Damage*, ISES Report no. I108.02.02.052.004, Department of Naval Architecture and Offshore Engineering, Technical University of Denmark, April 2000.
64. B.C. Simonsen. *Validation of Software for Prediction of Grounding Damage*, ISES Report no. I107.02.02.052.004, Department of Naval Architecture and Offshore Engineering, Technical University of Denmark, April 2000.
65. B.C. Simonsen. *Energy Absorption under Structural Collapse*, Lecture notes for the course 76583; Plates and Shells, Department of Naval Architecture and Offshore Engineering, Technical University of Denmark, 1999.
66. B.C. Simonsen. *Theory and Validation for the Collision Module*, Joint MIT-Industry Program on Tanker Safety, Report no 66, 1999.
67. B.C. Simonsen. *DAMAGE Theory Validation*, Joint MIT-Industry Program on Tanker Safety, Report no 63, May 1998.
68. B.C. Simonsen *Mechanics of Ship Grounding*, PhD thesis, Department of Naval Architecture and Offshore Engineering, the Technical University of Denmark, February 1997.
69. B.C. Simonsen and T. Wierzbicki. *Theoretical Manual on Grounding Damage of a Hull Bottom Structure*, Vol. III, Joint MIT-Industry Program on Tanker Safety, Report no 59, June 1997.

-
70. T. Wierzbicki and B.C. Simonsen. *Global Structural Model of Bow Indentation into Ship Side*, MIT Project on Rupture Analysis of Oil Tankers in a Side Collision, Report no. 2, September 1996.
 71. B.C. Simonsen and T. Wierzbicki. *Theory of Bow Cutting through Decks*, MIT Project on Rupture Analysis of Oil Tankers in a Side Collision, Report no. 1, September 1996.
 72. B.C. Simonsen and T. Wierzbicki. *Theoretical Manual on Grounding Damage of a Hull Bottom Structure, Vol. II*, Joint MIT-Industry Program on Tanker Safety, Report no 55, 1996.
 73. B.C. Simonsen, T. Wierzbicki and C.K. Choi. *Theoretical Manual on Grounding Damage of a Hull Bottom Structure, Vol. I*, Joint MIT-Industry Program on Tanker Safety, Report no 52, June, 1995.
 74. B.C. Simonsen. *User's Manual for SOFTGROUND, PC Computer Program for Analyzing Ship Groundings on Sandy Ocean Beds*. Joint MIT-Industry Program on Tanker Safety, Report no 45, 1995.
 75. L. Banke and B.C. Simonsen. *Experimental Analysis of Light Weight Efficient Offshore Fenders*, Department of Naval Architecture and Offshore Engineering, DTU, 1995.