

CURRICULUM VITAE

PROFESSOR, DR. TECHN., OLE SIGMUND, FEBRUARY 7, 2025

WORK ADDRESS

Department of Civil and Mechanical Engineering
Solid Mechanics
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PRIVATE ADDRESS

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PERSONAL DETAILS

Date of birth: May 28th, 1966
Citizenship: Danish
Married, 2 children

DEGREES

9/1991 M.Sc., Technical University of Denmark
1/1995 Ph.D., Technical University of Denmark
5/2001 Dr. Techn., Technical University of Denmark

POSITIONS

2024–2029 Villum Investigator, AMSTRAD, Villum Foundation.
2022– Elected member of the EUROMECH Council.
2021– Elected academic member of the Board of Governors of the Technical University of Denmark, reelected 2024.
2018–2021 Technical advisor and optionholder in Oqton (acquired by 3D Systems for 140M\$US Fall 2021).
2017–2023 Villum Investigator, InnoTop, Villum Foundation.
2011–2015 Elected President of ISSMO (Int. Soc. for Struct. and Multidisciplinary Optimization), Member of EC 2011–2023.
2011–2014 Head of Section, Solid Mechanics, Dept. Mech. Eng., Technical University of Denmark
2010– Professor, Dept. Mech. Eng., Technical University of Denmark
2004–2010 Chairman for the Danish Center for Applied Mathematics and Mechanics (www.dcam.dk)
2001–2010 Professor with special assignments, Dept. Mech. Eng., Technical University of Denmark
1997–2001 Associate Research Professor, Dept. Solid Mechanics, Technical University of Denmark
1995–1997 Assistant Research Professor, Dept. Solid Mechanics, Technical University of Denmark
1995–1996 Postdoc, Princeton Materials Institute, Princeton University
1993–1994 Ph.D.-student, Technical University of Denmark
1991–1992 Research Assistant, University of Essen, Germany

SELECTED MEMBERSHIPS

Royal Danish Academy of Sciences and Letters (2008-) and Danish Academy of Technical Sciences (ATV) (2003-)
Review Editor for: Struct. and Multidisc. Opt. (2000-2018) (Senior Advisor 2018-) and J. of Opt. Th. and Appl. (2016-).
Editorial Boards of: Struct. and Multidisc. Opt. (2000-), Lat. Am. J. of Sol. and Struct. (2003-), Acta Mech. Sin. (2008-),
Arch. of Appl. Mech. (2009-2016), and Comp. Meth. in Appl. Mech. and Eng. (2011-). Advisory board of Int. J. for Num.
Meth. in Eng. (2000-).

SELECTED HONOURS AND AWARDS

Gorm Pedersens Mem. Prize, DTU (1996). ISSMO/Springer Prize 1999 for Young Scientists. STATOIL-prize (2000). Invited
Sectional Lecturer at the 20th ICTAM 2000. Grundfos-Prize (2002). European Young Investigator Award (EURYI, 2004).
Annual party speaker at DTU (2005). Elite Research Prize of The Danish Ministry of Science (2007), Villum Kann Rasmussen
Annual Prize (2010). Honorary Professor NPU, Xi'an, China (2014). Sapere Aude Top-forsker (2014). Hyperion Innovation
Exc. Award(2017). Knight of the Order of the Dannebrog (Ridder af Dannebrog) (2020), Highly Cit. Res., WOS (2022).

SELECTED RESEARCH EDUCATION DUTIES

Opponent 23 Ph.D. theses from universities in Australia, Belgium, Denmark, Germany, Finland, France, Holland, Luxembourg,
Spain, Sweden and USA. Advisor or co-advisor for 31 (presently 3) Postdocs, 47 (presently 6) Ph.D.-students, 84 M.Sc.-projects
and 24 guest Ph.D.-students. Course responsible for 6 different under-graduate and graduate level courses and co-organizer and
teacher in 10 international Ph.D.-courses.

RESEARCH INTERESTS

Theoretical extensions and applications of topology optimization methods to the design of extremal materials, smart materials,
compliant mechanisms, MicroElectroMechanical Systems, crashworthiness, fluid systems and wave-propagation problems in
acoustics, elasticity, nano-optics, metamaterials and antennas.

SELECTED GRANTS (PERSONAL[/TOTAL])

2023-2028 PI, Villum Investigator Project AMSTRAD, Villum Foundation (30MDKK).
2021-2024 PI, DFF-2 project, TopCon (5/5MDKK).
2020-2026 CI, DNRF Center of Excellence, NanoPhoton (8/63MDKK).
2017-2023 PI, Villum Investigator Project InnoTop, Villum Foundation (28/31MDKK).
2014-2018 PI, DFF Advanced Grant (Sapere Aude), TopTEN, (8/12 MDKK)
2011-2015 CI, HTF, Danish Nat. Adv. Techn. Foundation: "ODAAS" (2.7/27 MDKK)
2011-2015 PI, Research project NextTop, Villum Foundation (9/14 MDKK)
2008-2013 CI, Villum Kann Rasmussen Centre of Excellence: "NAnophotonics for Tera-bit Communications" (2.5/25 MDKK)
2005-2010 PI, EURYI project, European Science Foundation: "Synthesis of optomechanical systems" (1.16 MEuro)
2003-2005 PI, STVF project, Danish Technical Research Council: "Designing bandgap materials" (2.9 MDKK)
1997-2002 PI, STVF Talent/THOR-programme: "Design of MicroElectroMechanical Systems (MEMS)" (7.22MDKK)

PAPERS AND CITATIONS

Total of 300 accepted papers in international journals, 1 monograph (co-authored with M. P. Bendsøe and 3 patent appli-
cations (one granted). Number of citations in ISI Science Citation Index is 36,600 (plus 4,500 to the monograph and 300 to the
ph.d.-thesis). Hirsch h -index is 85 (including monograph and thesis). ISI Highly Cited Researcher in 2022. 10 papers are on
the ISI Highly Cited list. Number of citations in Google Scholar is 71,300 with h -index 105.