Curriculum Vitae – Tomas Bohr

PERSONAL INFORMATION

Name: Bohr, Tomas Research ID: A-6106-2011 ORCID: 000-0003-3620-7276

Date of birth: 03.53.1953 Nationality: Danish Children: 3 (1982, 1986 & 1986)



URL for web site: Complex Motion in Fluids

EDUCATION

Dr. Scient. University of Copenhagen (1998) Dissertation: Studies in Turbulent Dynamical Systems Ph.D. (Lic. Scient.) University of Copenhagen (1983). Thesis: Elementary excitations in phase transitions

M.Sc. (Cand. Scient.) University of Copenhagen (KU) (1980). Thesis: The two-dimensional X-Y model and melting

CURRENT POSITION

1998 -

Professor of Physics, Department of Physics, Technical University of Denmark

PREVIOUS POSITIONS

1995 - 1998Forskningslektor (research associate professor) at the Niels Bohr Institute.

- 1990 1995"Hallas-Møller" associate professor (funded by the Novo Foundation) at the Niels Bohr Institute.
- 1987 1990"Lektorstipendiat" at the Niels Bohr Institute, University of Copenhagen
- 1985 1987Adjunkt at Fysisk Lab. I, H. C. Ørsted Institute, University of Copenhagen
- 1983 1985 Post Doctoral Research Associate at Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca, USA.

RESEARCH AREA

1. Fluid dynamics of free surface flows with instabilities, in particular theory and experiments on hydraulic jumps, bathtub vortices and rotating polygons

2. Biofluid dynamics, in particular sap flow in plants and dynamics of planktonic organisms

3. Pattern formation, nonlinear dynamics and chaos, in particular on the transition to chaos with mode-locking, coupled map description of turbulence incl. spiral defect turbulence

PUBLICATIONS

WoS publications: 114	Citations: 3085	H-index: number: 31
Year of first WoS publication: 1981	Citation impact: 27.8	

Other publications:

Monograph: Dynamical Systems Approach to Turbulence. Cambridge Nonlinear Science Series, Cambridge University Press 1998, coauthored with M. H. Jensen, G. Paladin and A.Vulpiani. (635 citations from Google Scholar).

Book: Bevægelsens uberegnelige Skønhed. Om Kaos. (Gyldendal 1992). Popularization of chaos.

FIVE SELECTED PUBLICATIONS

1. Jensen MH, Bak P, Bohr T (1984) Transition to chaos by interaction of resonances in dissipative systems. Physical Review A 30: 1. Circle maps: 1960-1969, 2: Josephson-junctions... 1970-1981 **2.** Bohr T, Dimon P, Putkaradze V (1993) Shallow water approach to the circular hydraulic jump. Journal of Fluid Mechanics 254: 635-648

3. Ellegaard C, Hansen AE, Haaning A, Hansen K, Marcussen A, Bohr T, Hansen JL, Watanabe S (1998) Creating corners in kitchen sinks. Nature 392: 767-768

4. Tophøj L, Mougel J, Bohr T, Fabre D (2013) Rotating Polygon Instability of a Swirling Free Surface Flow. Physical Review Letters 110: 194502(5)

5. Jensen KH, Berg-Sørensen K, Bruus H, Holbrook NM, Liesche J, Schulz A, Zwieniecki MA, **Bohr** T (2016) Sap flow and sugar transport in plants. Reviews of Modern Physics **88**: 1-63

GRANTS (2013-present)

- Co-PI at the Center for Ocean Life 2012-17 (VKR Centre of Excellence). Around 4 mio in all.
- Research Grant *Long distance sugar transport in trees* 2013-2016 from FNU (Danish Council for Independent reseach). 300.000 €

Anders Riis-Jensen (DK) 2017

SUPERVISION (2013-present)

Postdoc	Alexis Duchesne (FR) 2016-2018
PhD	Hanna Rademaker (DE) 2013-2016
MSc	Julia Dölger (DE) 2013-2014
Several Internship students from Holland and France	

TEACHING ACTIVITIES

- 1999 2018 MSc course: Continuum Physics, 5 ECTS (<u>10346</u>), 50%
- 2000 2018 BSc course: Electromagnetism for Physicists, 10 ECTS (10036) DTU, 50%
- 2016 2018 Diploma course: Physics 1, 2.5 ECTS (10933 stopped).
- 2007 Arranger of 6 "Physics Evenings" pr. year for all students.

ORGANISATION OF SCIENTIFIC MEETINGS (Co-organizer)

- 2004 Summer School: "Complex Motion in Fluids", Krogerup, Denmark (2004, 2007, 2009, 2011, 2013, 2015 (& 2019 planned).
- 2016 Summer School: "Complex Motion in Fluids", Twente, Holland
- 2017 Summer School: "Complex Motion in Fluids", Cambridge, UK
- 2018 Summer School: "Complex Motion in Fluids", Normandie, France

On scientific committee for EUFOAM 2018, Dynamics Days Europe 2015, Euromech 2014.

INSTITUTIONAL RESPONSIBILITIES

- 1999 2011 Member of the institute board / section head
- 2004 2012 Administrative head of the "Quantum Protein Centre" (Funded by Danish National Research Foundation).
- 2006 Head of the Department for half a year

COMMISSIONS OF TRUST

- 2018 External evaluator (Hceres) of dept. *Matiere et Systemes Complexes* (MSC) of University Paris (7) Diderot, France
- 2017, 2018 Member of selection committees for professorates at Space-DTU
- 2003 2015 Member of evaluation committees for Habilitation à Diriger des Recherches (HDR) for C. Clanet (2003), D. Fabre (2012), J. Hoepffner (2015) plus several phd-committees, including J. Mougel (Toulouse 2014) and A. Duchesne (Paris 2014)

MEMBERSHIPS OF SCIENTIFIC SOCIETIES (if applicable)

- 2006 Co-funder and director of Fluid DTU, based on a grant from the Danish National Research Foundation for visiting professor Hassan Aref.
- 2006 Elected member of "Kgl. Danske Videnskabernes Selskab" (Royal Danish Academy of Sciences)
- 2009 Elected Fellow of the American Physical Society (Division of Fluid Dynamics).

MAJOR COLLABORATIONS

Visiting professor one month at Ecole Normale Superieur, Paris (2003), IRPHE, Universite d'Aix-Marseille (2005), MSC-laboratory, Paris 7, Paris (2009). David Fabre and Jerome Mougel, IMFT, Toulouse. Missy Holbrook, Department of Organismic and Evolutionary Biology, Harvard University