

CURRICULUM VITAE

March 2019

Name: **Mogens Høgh Jensen**
Date of birth: March 2, 1955, Denmark
Marital Status: Married, two children

Address: Niels Bohr Institute Tel: +45: 35325371 – 28755371
 Blegdamsvej 17 Fax: +45: 35325425
 DK-2100 København Ø e-mail: mhjensen@nbi.dk
 Denmark

Home address: Skovringen 46
 DK-2950 Vedbæk
 Denmark tel: +45: 45 66 22 11

Education: D.Sc. (dr.scient.), University of Copenhagen, Sept. 1994
 Ph.D., University of Copenhagen, June 1984
 M.S. (cand.scient.), University of Copenhagen, August 1981

Research and teaching experience:

President, Royal Danish Academy of Science and Letters, 2016-
Secretary General, Royal Danish Academy of Science and Letters, 2012-2016
Member of the Board, Centre de Recerca Matematica, University Autonoma of Barcelona, 2011-
Member of the C3 Commission, International Union of Physics, 2017-
Guest Professor, Harvard University, 2011
Guest Professor, Fukuoka University, Japan, 2009, 2015
Head of Section (~ 90 people), Niels Bohr Institute/Blegdamsvej, 2007-2012
Director, Danish Center for Biophysics, BioNET, 2004-2016
Co-director, Center for Models of Life, C-Mol, 2005-2015
Head of section (~ 40 people), Biocomplexity Group 2004-
Professor, The Niels Bohr Institute, University of Copenhagen, 2002-
Node coordinator, Three EU-TMR networks, 1997-2008
Grant Holder, Complexity Lab, 2002-2014
Director, Center for Chaos and Turbulence Studies, 1999-2002
Research Professor, The Niels Bohr Institute, University of Copenhagen, 1997-2002
Associate Professor, The Niels Bohr Institute, University of Copenhagen, 1996-
Research Lecturer, The Niels Bohr Institute, University of Copenhagen, 1993-1995
Associated Member of Nordita Faculty, 1993-1998
Visiting Professor, Rome University, La Sapienza, 1992, 1996
Assistant Professor, Nordita, 1986-1993
Visiting Scientist, The James Franck Institute, The University of Chicago, 1987, 1988
Research Associate, The James Franck Institute, The University of Chicago, 1984-1986
Visiting Scientist, Los Alamos and Brookhaven National Laboratories, 1983
Assistant Lecturer, The Technical University of Denmark, 1981

Awards and honors

Knighted by the Queen of Denmark, Nov. 2017.

The Physics Prize of Norway, Gunnar Randers - given by King Harald, May 2011.

Member of the Royal Danish Academy of Sciences and Letters, Apr. 2000.

The Ole Rømer Prize, The Royal Danish Academy of Sciences, Oct. 1993.

The Kirstine Meyer Prize, The Danish Society for Natural Sciences, Dec. 1986.

The Gold Medal of the University of Copenhagen, August 1983.

Larger Grants

Principal Investigator:

2014-2018: Research Council Grant *Synchronization of Oscillators i and Traveling Waves in Flies and Embryos*, 2.5 mill kr (~450.000 \$)

2011-2014: Research Council Grant *Cooperative Phenomena in Flows*, 1.4 mill kr (~260.000 \$).

2010-2014: Lundbeck Foundation Grant for *Studies of Amyloid Formation: Theory and Experiments*, 5 mill kr (~900.000 \$).

2004-2009: BioNET - *Danish Center for Biophysics*, Villum Kann Rasmussen Foundation, 25 mill kr (~4.5 mill \$).

2007-2010: Research Council Grant for *Complexity Lab*, 1.2 mill kr (~250.000 \$).

2003-2006: Research Council Grant for *Complexity Lab*, 1.4 mill kr (~260.000 \$).

1999-2002: *Center for Chaos and Turbulence Studies*, 8 mill kr (~1.5 mill \$).

Co-Principal Investigator:

2015-2020: *StemPhys*, Danish National Research Foundation, 60 mill kr (~ 11 mill \$)

2013-2017: *Social Fabric*, Copenhagen University 2016 Interdisciplinary Grant, 17 mill kr (~3 mill \$)

2010-2015: *Center for Models of Life*, Danish National Research Foundation, 30 mill kr (~5.5 mill \$).

2009-2013: *Copenhagen University Star Programme*, 25 mill kr (~4.5 mill \$).

2005-2010: *Center for Models of Life*, Danish National Research Foundation, 25 mill kr (~4.5 mill \$).

1993-1999: *Center for Chaos and Turbulence Studies*, 20 mill kr (~3.5 mill \$).

Publication resumé:

Total number of **citations: over 13200.**

H-index: **~46.**

Most cited paper: **Ref. 24 - 4021 citations.**

Book: T. Bohr, M.H. Jensen, G. Paladin and A. Vulpiani, "Dynamical Systems Approach to Turbulence", Cambridge University Press (1998) - **669 citations.**

Supervisor for 52 master students, 32 Ph.D. students, 30 post docs.

Organization of conferences, editor, supervision:

Conference on "Frontiers in Condensed Matters Physics" (with A.R. Mackintosh and A. Luther), Copenhagen, Oct. 6-9, 1987.

Summer School on "Chaos and Complexity" (with J. Hertz and P. Cvitanović), Yngsjö, Sweden, 22-29 August, 1988.

Workshop on "Quantum Chaos" (with B. Mottelson, A. Wirzba, T. Bohr and P. Cvitanović), Copenhagen, 22-25 Nov. 1988.

Workshop on "Self-Organized Critical Phenomena" (with T. Bohr and H.J. Jensen), Copenhagen, 31 May - 2 June 1990.

Conference and School on "Wrinkling of Surfaces in Nonlinear Systems" (with I. Procaccia, H. Cerdeira and T. Bohr), Trieste, Italy, 12 July - 26 July, 1992.

Summer School on "Complex Systems" (with P. Cvitanović and J. Hertz), Humlebæk, August 1993.

Conference and School on "Physics of Biological Systems: From Molecules to Species", Humlebæk, August 1995 (with J. Hertz and O. Mouritsen).

Conference "Nordic Non-Linear Days: Complexity, Coherence and Non-Equilibrium Systems", Humlebæk, August 1996 (with P.L. Christiansen, P. Cvitanović, E. Mosekilde and K. Sneppen).

Topical Meeting "Biophysics Day", Copenhagen, Oct. 1996.

Summer School on "Physics of Molecular Biology", Humlebæk, August 1998 (with K. Sneppen, J. Hertz, E. Aurell and H. Flyvbjerg).

Conference "Non-Linear Science Festival" (with T. Bohr and P. Cvitanović), CATS 5th year conference, December 1998

Member of committee for "Workshop on nonequilibrium Physics", Nordita, Sept. 1999 (with H. Fogedby, M. Laessig, J. Hertz, P. Muratore)

Conference "Non-Linear Science Festival II" (with J. Juul Rasmussen, P.L. Christiansen and T. Bohr), Risø, December 1999

Conference and School on "Dynamics of Biological Molecules and Networks", Humlebæk, August 2002 (with J. Hertz, K. Sneppen, L. Oddershede, H. Flyvbjerg, K. Berg-Sørensen).

Conference and School on "Complex Motion in Fluids", Humlebæk, August 2004 (with T. Bohr, H. Bruus, B. Lautrup, J. Juul Rasmussen).

Director of Symposium "Opening of BioNET", Copenhagen, March 2005.

Conference and School on "Physics of Life", Humlebæk, August 2005 (with K. Berg-Sørensen, J. Gluckstad, T. Heimbürg, J. Hertz, R. Metzler, L. Oddershede, K. Sneppen).

Conference "Experimental and Theoretical Biophysics", Odense, October 30-31, 2006 (with O. Mouritsen and D. Otzen).

Workshop on "Econophysics: Trends and Challenges", Copenhagen 8-9 May, 2008 (with P. Ahlgren, I. Simonsen and H. Dahl).

Summerschool on "DNA Dynamics and Life Strategies", Copenhagen 12-18 August, 2012 (with N. Mitarai, K. Sneppen and L. Oddershede).

Workshop on "Dynamics of Stem Cell Decisions", Copenhagen, August 28-30, 2013. (with N. Mitarai and A. Trusina).

Conference and School on "Models of Life", Humlebæk, August 2015 (with N. Mitarai and K. Sneppen).

Workshop on "Physical Concepts in Stem Cell Biology", Tisvilde, August 2017 (with E. Ober, A. Grappin-Botton, J. Brickman, A. Trusina, L. Oddershede).

Member of the Programme Committee for NATO Advanced Study Institutes, Geilo, Norway, 1991, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013.

Member of Programme Committee for "International Conference on Statistical Mechanics", Taipei, 1993, 1994, 1996, 1997, 1998.

Member of Programme Committee for "Fractals", International Conferences, London, 1993, 1994, 1995, 1997, 1998, 1999, 2000, 2001.

Member of Scientific Committee for European Conference on "Computational Physics", Granada, Sept. 98.

Member of International Advisory Committee for "Dynamics Days Asia-Pacific", 1998.

Member of the Scientific Board, EU Programme EXYSTENCE, 2001-2006.

Member of Scientific Committee, "STATPHYS 22", Bangalore, 2004.

Member of Scientific Committee, "STATPHYS 23", Genova, 2007.

Member of Scientific Committee and Biophysics Panel, "STATPHYS 24", Cairns, 2010, "STATPHYS 25", Seoul, 2013, "STATPHYS 26", Lyon, 2016.

Member of organizing committee "NetSci 2013, International School and Conference on Network Science, June, 2013.

Director, Niels Bohr Summer Institute, "Complexity and Criticality", Copenhagen, Aug. 2003.

Organizer and Chair, "Oscillations and Segmentation: Dynamical Genetic Regulation in Space and Time", APS March Meeting, New Orleans, 2008.

Member of the International Committee, "Dynamics Days Asia Pacific", Chennai, India, 2014.

Member of the International Advisory Committee, "Perspective in Non-linear Dynamics", Sao Paolo, 2019.

Associate Editor for *Physica A*, Elsevier (2010-) and *Quantitative Biology* (2018-).
Member of the Editorial Board, "International Journal of Bifurcations and Chaos", World Scientific Publishing Company (96-05).
Editor of "Physica Scripta", The Royal Swedish Academy of Sciences (95-99).
Node coordinator for four European TMR Networks on "Intermittency", "Fractals", "EV-ERGROW" and "Lagrangian Turbulence".

Member of the Board of the "Niels Bohr and Ole Rømer Foundations", Royal Danish Academy, 2008-

Member of the Board of the Niels Bohr Institute, 1996-2007

Member of the Board of the Niels Bohr Institute f. AFG, 2001-2007

Member of the Research Committee of the Niels Bohr Institute, 1996-2014

Chairman of the Board "Niels Bohr and Ole Rømer Prize", 2008-

Chairman of the Board "Aksel Tovborg Prize", 2012 -

Chairman of the Board "Julie von Mullen Prize", 2016-

Publications

- [1] P. Bak and MHJ, "Theory of Helical Magnetic Structure and Phase Transitions in MnSi and FeGe", *J.Phys.* **C13**, L881 (1980). The content of this paper is described in L.D. Landau and E.M. Lifshitz, "Electrodynamics of Continuous Media", Chap. 52, Pergamon, New York (1985) (490 citations).
- [2] P. Bak and MHJ, "Bifurcations and Chaos in the $i\phi_4$ Theory on a Lattice", *J.Phys.* **A15**, 1893 (1982).
- [3] P. Cvitanović and MHJ, "Universality in Transitions to Chaos" in "Chaos and Universality", NORDITA reprint selection on Chaos, eds. P. Cvitanović and M.H. Jensen (1981).
- [4] MHJ and P. Lomdahl, "Interchain interaction and fractionally charged solitons in a commensurate charge-density-wave system", *Phys.Rev.B* **26**, 1086 (RC) (1982).
- [5] P. Cvitanović and MHJ, "Universalitet i overgang til kaos", *Fys.Tidsk.* **80**, 82 (1982).

- [6] MHJ and P. Bak, "Mean-field theory of the three-dimensional anisotropic Ising model as a four-dimensional mapping", *Phys.Rev.B* **27**, 6853 (1983) (130 citations).
- [7] MHJ, P. Bak and T. Bohr, "Complete devil's Staircase, Fractal Dimension, and Universality of Mode-Locking Structure in the Circle Map", *Phys.Rev.Lett.* **50**, 1637 (1983) (320 citations).
- [8] MHJ, P. Bak, and A. Popielewicz, "Pinning-free soliton lattices and bifurcation in a discrete double-well model: Exact results", *J.Phys.* **A16**, 4369 (1983).
- [9] MHJ, P. Bak, and T. Bohr, "The complete devil's staircase and universality of mode-locking structure in discrete mappings" in Proceedings of the NATO ASI Geilo School on *Multicritical Phenomena*, eds. R. Pynn and A.T. Skjeltorp, Plenum, New York, p. 265 (1984).
- [10] P. Bak and MHJ, "Commensurability, Chaos, and the devil's staircase" in Proceedings of the NATO ASI Geilo School on *Multicritical Phenomena*, eds. R. Pynn and A.T. Skjeltorp, Plenum, New York, p. 237 (1984).
- [11] MHJ, "Chaos in discrete Lattice Systems", Thesis honored by the *Gold Medal of the University of Copenhagen*, (1983).
- [12] P. Bak, T. Bohr, MHJ, and P.V. Christiansen, "Josephson junctions and Circle maps", *Solid State Comm.* **51**, 231 (1984).
- [13] MHJ and P. Bak, "Pinning and annealing of solitons in modulated structures", *Phys.Rev.B* **29**, 6280 (1984).
- [14] P. Alstrm, MHJ, and M.T. Levinsen, "Fractal Structure of Subharmonic steps in a Josephson junction: An Analog Computer Calculation", *Phys.Lett.* **103A**, 171 (1984).
- [15] MHJ and P. Bak, "Mean-field theory as a discrete mapping: Solitons, Chaos and Incommensurate Phases", in Proceedings of the 5'th International Seminar on Magnetism, Ed. K. Elk, HfV Dresden (1984).
- [16] MHJ, P. Bak, and T. Bohr, "Transition to chaos by interaction and overlap of resonances, I: Circle Maps", *Phys.Rev.A* **30**, 1960 (1984) (504 citations).
- [17] P. Bak, T. Bohr, and MHJ, "Transition to chaos by interaction and overlap of resonances, II: Josephson junctions, Charge-density-waves, and Standard maps", *Phys.Rev.A* **30**, 1970 (1984) (223 citations).
- [18] P. Alstrm, M.T. Levinsen, and MHJ, "Analog Computer Calculation of the Fractal Structure of Substeps in a Josephson junction", Proceedings of the 17th Conference on Low Temperature Physics, Physica B (1985).
- [19] "Chaos in Space and Time", Ph.D. thesis, University of Copenhagen (1984).

- [20] MHJ and P. Bak, "Spatial Chaos" in Proceedings of the 59th Nobel Symposium on *Chaos and Related Problems*, ed. S. Lundqvist, *Physica Scripta*. **T9**, 64 (1985).
- [21] P. Bak, T. Bohr, and MHJ, "Mode-locking and Transition to Chaos in Dissipative Systems" in Proceedings of the 59th Nobel Symposium on *Chaos and Related Problems*, ed. S. Lundqvist, *Physica Scripta*. **T9**, 50 (1985).
- [22] P. Cvitanović, MHJ, L.P. Kadanoff, and I. Procaccia, "Renormalization, Unstable Manifolds, and the Fractal Structure of Mode-Locking", *Phys.Rev.Lett.* **55**, 343 (1985) (131 citations).
- [23] MHJ and I. Procaccia, "Chaos via Quasiperiodicity: Universal Scaling Laws in the Chaotic Regime", *Phys.Rev.A* **32**, 1225 (1985).
- [24] T.C. Halsey, MHJ, L.P. Kadanoff, I. Procaccia, and B. Shraiman, "Fractal Measures and their Singularities: The Characterization of Strange Sets", *Phys.Rev.A* **33**, 1141 (1986) (3973 citations).
- [25] MHJ, L.P. Kadanoff, A. Libchaber, I. Procaccia, and J. Stavans, "Global Universality at the Onset of Chaos: Results of a Forced Rayleigh Benard experiment", *Phys.Rev.Lett.* **55**, 2798 (1985) (364 citations).
- [26] P. Cvitanović, MHJ, L.P. Kadanoff, and I. Procaccia, "Circle Maps in the Complex plane", in Proceedings of the 6th International Symposium on *Fractals in Physics*, eds. L. Pietronero and E. Tosatti, North-Holland (1985).
- [27] D. Bensimon, MHJ, and L.P. Kadanoff, "Renormalization Group Analysis of the Global Structure of the Period-Doubling Attractor", *Phys.Rev.A* **33**, 3622 (RC) (1986) (59 citations).
- [28] J.A. Glazier, MHJ, A. Libchaber, and J. Stavans, "Structure of Arnold Tongues and the $f(\alpha)$ Spectrum of Period Doubling", *Phys.Rev.A* **34**, 1621 (RC) (1986).
- [29] S.K. Sarkar and MHJ, "Interface Dynamics in Directional Solidification: A Lattice Simulation with biased Random Walkers", *Phys.Rev.A* **35**, 1877 (1987).
- [30] MHJ, A. Libchaber, P. Pelcé, and G. Zocchi, "Effect of Gravity on the Saffman-Taylor Meniscus: Theory and Experiment", *Phys.Rev.A* **35**, 2221 (1987).
- [31] T.C. Halsey and MHJ, "Spectra of Scaling Indices for Fractal Measures: Theory and Experiment", in Proceedings of Conference on *Spatio-Temporal Coherence and Chaos in Physical Systems*, eds. A.R. Bishop, G. Gruner, and B. Nichoalenko, *Physica* **16D** (1986).
- [32] M.J. Feigenbaum, MHJ, and I. Procaccia, "Time Ordering and the Thermodynamics of Strange Sets: Theory and Experimental Tests", *Phys.Rev.Lett.* **57**, 1503 (1986) (184 citations).

- [33] MHJ, L.P. Kadanoff, and I. Procaccia, "Scaling Structure and Thermodynamics of Strange Sets", *Phys.Rev.A* **36**, 1409 (1987) (135 citations).
- [34] MHJ, "Multifractal Scaling Structure at the Onset of Chaos: Theory and Experiment", in *The Physics of Chaos and Systems far from Equilibrium*, ed. M. Duong-van, *Nucl. Phys. B (Proc.Suppl.)* **2**, 487 (1987).
- [35] MHJ, "Multifractals: Formalism and Experiments", in the Proceedings of the NATO ASI Geilo School on *Time-Dependent Effects in Disordered Systems*, Eds. R. Pynn and T. Riste, Plenum, New York, p. 173 (1987).
- [36] T. Bohr and MHJ, "Order Parameter, Symmetry Breaking and Phase Transitions in the Description of Multifractal Sets", *Phys.Rev.A* **36**, 4904 (1987).
- [37] G.H. Gunaratne, MHJ, and I. Procaccia, "Universal Strange Attractors on Wrinkled Tori", *Nonlinearity* **1**, 157 (1988).
- [38] MHJ, "Comment on Organization of Chaos", *Phys.Rev.Lett.* **60**, 1680 (1988).
- [39] P. Bak, T. Bohr, and MHJ, "Circle Maps, Mode-Locking and Chaos" in *Directions in Chaos*, vol. II, ed. H. Bai-lin, World Scientific, Singapore, p. 16 (1988).
- [40] T. Bohr, P. Cvitanović, and MHJ, "Fractal Aggregates in the Complex Plane", *Europhys.Lett.* **6**, 445 (1988).
- [41] MHJ, "Phase Transitions on Strange Attractors and Fractal Aggregates", in *Universalities in Condensed Matter*, eds. R. Jullien, L. Peliti, R. Rammal, and N. Boccara, Springer, Berlin, p. 233 (1988).
- [42] MHJ, "Multifractals in Convection and Aggregation", in *Random Fluctuations and Pattern Growth: Experiments and Models*, eds. H.E. Stanley and N. Ostrowsky, Kluwer Academic, Boston, p. 292 (1988).
- [43] MHJ, "Fluctuations and Scaling in a Model for Boundary Layer Induced Turbulence", *Phys.Rev.Lett.* **62**, 1361 (1989).
- [44] T. Bohr, A.W. Pedersen, MHJ, and D. Rand, "Vortex Dynamics in a Coupled Map Lattice", in *New Trends in Non-Linear Dynamics and Pattern Forming Phenomena: The Geometry of Non-Equilibrium*, eds. P. Heurre and P. Coullet, Plenum, New York (1988).
- [45] MHJ, "Boundary Layer Instability in a Coupled-Map Model", *Physica* **38D**, 203 (1989).
- [46] J.M. Houlrik, I. Webman and MHJ, "Mean-Field Theory and Critical Behavior of Coupled Map Lattices", *Phys.Rev.A* **41**, 4210 (1990).
- [47] T. Bohr, A.W. Pedersen and MHJ, "Transition to Turbulence in a Discrete Ginzburg-Landau Model", *Phys.Rev.A* **42**, 3626 (1990).

- [48] J.M. Houlrik, I. Webman and MHJ, "Critical Behavior and Mean-Field Theory of Coupled Map Lattices", in the Proceedings of the *III Conference on Computer Simulations in Natural Sciences*, *Phys.Script.* **T33**, 189 (1990).
- [49] T. Bohr, A.W. Pedersen, MHJ and D. Rand, "Turbulence and Linear Stability in a Discrete Ginzburg-Landau Model", in *Nonlinear Evolution of Spatio-Temporal Structures*, Eds. F.H. Busse and L. Kramer, Plenum, p.425 (1990).
- [50] K. Chen, P. Bak and MHJ, "Weak Chaos in a Turbulent Model", *Phys.Lett.* **149A**, 207 (1990).
- [51] MHJ "Modelling of Fractals and Turbulence", in the Proceedings of the NATO ASI on *Information Dynamics*, p. 103, Eds. H. Atmanspacher and H. Scheingraber, Plenum, New York (1991).
- [52] MHJ, G. Paladin and A. Vulpiani, "Intermittency in a Cascade Model for Three-Dimensional Turbulence", *Phys.Rev.A* **43**, 798 (1991) (204 citations).
- [53] T. Bohr, G. Grinstein, MHJ and K. Sneppen, "Dynamics of Rough Interfaces with Conservation Laws", preprint (1990).
- [54] MHJ, G. Paladin and A. Vulpiani, "Kolmogorov Spectra and Intermittency in Turbulence", to be published in the Proceedings of the NATO ARW on *The Global Geometry of Turbulence*, p. 221, ed. J. Jimenez, Plenum, New York (1991).
- [55] MHJ, "Models of Turbulence", in the Proceedings of the "IVth Nordic Conference on Computer Simulations in Natural Sciences", ed. A. Hansen et al, *Physica Scripta* **T38**, 22 (1991).
- [56] H.C. Fogedby, MHJ, H.J. Jensen, T. Bohr, H.H. Rugh and Y.-C. Zhang, "Temporal Fluctuations of an Ideal Brownian Gas", *Mod.Phys.Lett.B* **5**, 1837 (1991).
- [57] MHJ, G. Paladin and A. Vulpiani, "Multiscaling in Multifractals", *Phys.Rev.Lett.* **67**, 208 (1991) (74 citations).
- [58] MHJ, "Multifractals, Multiscaling and the Energy Cascade of Turbulence", in the Proceedings of the Nato ASI *Spontaneous Formation of Space-Time Structures and Criticality*, Geilo, Eds. T. Riste and D. Sherrington, Kluwer (1991).
- [59] A.-L. Barabasi, R. Burbonnais, MHJ, J. Kertesz, T. Vicsek and Y.-C. Zhang, "Multifractality of Growing Surfaces", *Phys.Rev.A* **45**, 6951 (RC) (1992).
- [60] MHJ and I. Procaccia, "Unusual Exponents in Interface Roughening: The Effects of Pinning", *J. de Physique II* **1**, 1139 (1991).
- [61] J.M. Houlrik and MHJ, "Mean-Field Approximations and Perron-Frobenius Equations", in *Theory and Applications of Coupled Map Lattices*, p. 95, ed. K. Kaneko, John Wiley, New York (1993).

- [62] J.M. Houlrik and MHJ, "Critical Correlations in Coupled Map Lattices", *Phys.Lett.A* **163**, 275 (1992).
- [63] T. Bohr, G. Grinstein, C. Jayaprakash, MHJ and D. Mukamel, "Chaotic Interface Dynamics: a Model with Turbulent Behaviour", *Phys.Rev.A* **46**, 4791 (1992).
- [64] MHJ, G. Paladin and A. Vulpiani, "A Shell Model for Turbulent Advection of Passive Scalar Fields", *Phys.Rev.A* **45**, 7214 (1992).
- [65] I. Procaccia, A. Brandenburg, MHJ and A. Vincent, "The Fractal Dimension of Iso-Vorticity Structures in 3-dimensional Turbulence", *Euro.Phys.Lett.* **19**, 183 (1992).
- [66] MHJ, G. Paladin and A. Vulpiani, "Intermittency effects of energy cascade and passive scalar fields", in Proceedings of *Pattern Formation in Complex Dissipative System*, p. 387, ed. S. Kai, World Scientific, London (1992).
- [67] L. Biferale, MHJ, G. Paladin and A. Vulpiani, "Multifractality in a Shell Model for 3D Turbulence", *Physica A* **185**, 19 (1992).
- [68] I. Procaccia, MHJ, V.S. L'vov, K. Sneppen and R. Zeitak, "Surface Roughening and the long Wavelength Properties of the Kuramoto-Sivashinsky Equation", *Phys.Rev.A* **46**, 3220 (1992).
- [69] A. Crisanti, MHJ, A. Vulpiani and G. Paladin, "Strongly Intermittent Chaos and Scaling in an Earthquake Model", *Phys.Rev.A* **46**, 7363 (RC) (1992).
- [70] K. Sneppen, J. Krug, MHJ, C. Jayaprakash and T. Bohr, "Dynamic Scaling and Crossover Analysis for the Kuramoto-Sivashinsky Equation", *Phys.Rev.A* **46**, 7351 (RC) (1992) (144 citations).
- [71] A. Crisanti, MHJ, G. Paladin and A. Vulpiani, "Predictability and The Butterfly Effect in Turbulent Flows", *Int. Journ. of Bif. and Chaos* **3**, 1581 (1993).
- [72] MHJ, "Intermittency in a Cascade Model of Turbulence", in Proceedings of Spring Meeting on Nonlinear Dynamics 1991, ed. J.P. van der Weele, P. 131 (1992).
- [73] T. Bohr, G. Grinstein, C. Jayaprakash, MHJ, J. Krug and D. Mukamel, "Turbulence, Power Laws and Galilean Invariance", *Physica D* **59**, 177 (1992).
- [74] A. Crisanti, MHJ, A. Vulpiani and G. Paladin, "Intermittency and Predictability in Turbulence", *Phys.Rev.Lett.* **70**, 166 (1993) (53 citations).
- [75] A. Crisanti, MHJ, G. Paladin and A. Vulpiani, "Predictability in Turbulence: A Shell Model Study", to be published in the Proceedings of the conference on "Unstable and Turbulent Motion of Fluids", Kyoto, Ed. S. Kida, World Scientific, Singapore, p.210 (1993).

- [76] K. Sneppen and MHJ, "Colored Activity in Self-Organized Critical Interface Dynamics", *Phys.Rev.Lett.* **71**, 101 (1993) (74 citations).
- [77] K. Sneppen and MHJ, "Reply on Self-Organized Interface Pinning", *Phys.Rev.Lett.* **70**, 3833 (1993).
- [78] A. Crisanti, MHJ, G. Paladin and A. Vulpiani, "Predictability of Velocity and Temperature Fields in Intermittent Turbulence", *J. Phys. A* **26**, 6943 (1993).
- [79] K. Sneppen and MHJ, "Multidiffusion in Dynamics of Wrinkled Strings and Membranes", *Phys.Rev.E* **49**, 919 (1994).
- [80] K. Sneppen and MHJ, "Self Organized Intermittent Activity for Strings and Interfaces", to be published in the Proceedings of the Santa Fe Workshop on *Spatio-Temporal Pattern Formation* (1993).
- [81] K. Sneppen and MHJ, "Critical Wrinkling of Depinned Interfaces, Strings and Membranes", in the Proceedings of the Geilo ASI on *Phase Transitions in Systems with Competing Energy Scales*, eds. T. Riste and D. Sherrington, Kluwer, Boston, p. 437 (1993).
- [82] A. Crisanti, MHJ, G. Paladin and A. Vulpiani, "Intermittency and predictability in a shell model for three-dimensional turbulence", *Physica D* **76**, 239 (1994).
- [83] J. Falk, MHJ and K. Sneppen, "Intermittent Dynamics and Self Organized Depinning in Propagating Fronts", *Phys.Rev.E* **49**, 2804 (1994).
- [84] J. Falk, K. Sneppen and MHJ, "Self-Organized Dynamics of Fronts: Intermittency and Multiscaling", *Chaos, Fractals and Solitons* **5**, 1847 (1995).
- [85] MHJ, G. Paladin and A. Vulpiani, "Shell Model of Turbulence", in the Proceedings of the NATO ASI on *Turbulence, Weak and Strong*, Cargese, ed. P. Tabeling, Plenum, New York, p. 101 (1995).
- [86] MHJ, G. Paladin and A. Vulpiani, "Predictability of Turbulence", in the Proceedings of the NATO ASI on *Turbulence, Weak and Strong*, Cargese, ed. P. Tabeling, Plenum, New York, p. 75 (1995).
- [87] MHJ, "Multifractals and Multiscaling", Doctoral Thesis, Phys. Rep., accepted (1994).
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- [220] T. Holst-Hansen, M.H. Jensen, and A. Trusina "Geometry affects transition between bistable and excitable state", *Phys. Rev. E.* (accepted) (2019).
- [221] T.Holst-Hansen, P. Yde, M.H. Jensen, T. Mandrup-Poulsen, and A. Trusina, "Tipping-point transition from transient to persistent inflammation in pancreatic islets", *PLoS Comp. Biology*, submitted (2019).
- [222] M.H. Jensen, L.P. Kadanoff and S. Krishna, "Universal behavior of two interacting rhythms: Lessons for biology", preprint (2019).
- [223] J.S. Juul, S. Krishna and M.H. Jensen, "Steady state phase distribution and a link between somite size and period difference in ex-vivo cultures of mouse PSM cells", preprint (2019).
- [224] G. Tiana, S. Pigolotti and M.H. Jensen, "Multifractal Structure of Topologically Associating Domains in DNA", preprint (2019).
- [225] M.L. Heltberg, S.-hong Chen, A. Jimenez, A. Jambhekar, M.H. Jensen, and G. Lahav, "Inferring leading interactions in the p53 network through live-cell imaging and modeling", *Cell* submitted (2019).

Total number of citations: over 13200.

H-index: ~46.

Most cited paper: Ref. 24 - 4020 citations

Monograph: Ref. 97 - 669 citations

Lectures at International Conferences.

- Lecture at the Danish Physical Society Spring Meeting, May 1982.
- Lecture at "Dynamics Days", Twente, Holland, June 1982.
- Contribution at the meeting on "Solitons and Chaos", Corsica, July 1982.
- Invited Lecture at the Danish Physical Society Annual meeting, Lyngby, Oct. 1982.
- Lecture at the NATO ASI on "Multicritical Phenomena", Geilo, Norway, March 1983.
- Two Invited Lectures at the "Nordita Workshop on Chaos", May-August 1983.
- Invited Lecture at the 5'th International Conference on Magnetism, Dresden, April 1984.
- Invited Lecture at the 59'th Nobel Symposium on "Chaos and Related Problems", Sweden, June 1984.
- Lecture at the Conference on "Chaos", Atlanta, March 1985.
- Invited Lecture at the Meeting on Statistical Physics, Rutgers, Dec. 1985.
- Invited Lecture at "Dynamics Days", La Jolla, Jan. 1986.
- Invited Lecture at "Non-Linear Days", Santa Cruz, Jan. 1986.
- Invited Contribution at "Spatio-Temporal Coherence and Chaos in Physical Systems", Los Alamos, Jan. 1986.
- Invited Lecture at "Dynamics Days", Twente, June 1986.
- Invited Lecture at "Aspen Workshop on Chaos", June 1986.
- Invited Lecture at the Danish Physical Society Annual Meeting, Nov. 1986.
- Invited Lecture at "Dynamics Days", La Jolla, Jan. 1987.
- Invited Lecture at "Dynamics of Chaos and Systems Far from Equilibrium", Monterey, Jan. 1987.
- Invited Lecture at the NATO ASI on "Time-Dependent Effects in Disordered Materials", Geilo, Norway, March 1987.
- Invited Lecture at "Dynamics Days", Houston, USA, Jan. 1988.
- Lecture at "Universalities in Condensed Matter", Les Houches, March 1988.
- Three Invited Lectures at the NATO ASI "Random Fluctuations and Pattern Growth: Experiments and Models", Corsica, July 1988.
- Invited Lecture at the NATO ASI "New Trends in Nonlinear Dynamics and Pattern Forming Phenomena: The Geometry of Nonequilibrium", Corsica, July-August 1988.

- Two Invited Lectures at Summer School on "Chaos and Complexity", Yngsjoe, Sweden, Aug. 1988.
- Invited Lecture at "Symposium on Non-Linear Systems", Trieste, Italy, Oct. 1988.
- Invited Lecture at "Topical Meeting on Chaos and Complexity", The Technical University of Denmark, Jan. 1989.
- Invited Lecture at "Dynamics Days", Dusseldorf, Germany, June 1989.
- Invited Seminar at Aspen Workshop on "Spatial Extended Non-equilibrium Systems", Aspen, USA, August 1989.
- Invited Lecture at NATO ARW on "Nonlinear Evolution of Spatio-Temporal Structures in Dissipative Continuous Systems", Bayreuth, Germany, Sept. 1989.
- Invited Lecture at Topical Meeting on "Prediction", Academy of The Technical Sciences, Lyngby, Feb. 1990.
- Invited Lecture at Topical Meeting on "Chaos and Fractals", University of Lund, Sweden, March 1990.
- Invited Lecture at NATO ASI on "Information Dynamics", Irsee, Germany, June 1990.
- Three Invited Lectures at Summer School on "Chaos and Critical Phenomena", Taipei, Taiwan, June 1990.
- Invited Lecture at NATO ARW on "The Global Geometry of Turbulence", Rota, Spain, July 1990.
- Invited Lecture at NATO ASI on "Non Linear Phenomena Related to Growth and Form", Corsica, July 1990.
- Invited Lecture at "IV'th Nordic Conference on Computer Simulations in Natural Sciences", Sandefjord, Norway, August 90.
- Invited Lecture at NATO ARW on "Aspects on Nonlinear Dynamics Solitons and Chaos", Brussels, Belgium, Dec. 90.
- Three Invited Lectures at NATO ASI on "Spontaneous Formation of Space-Time Structures and Criticality", Geilo, Norway, Apr. 91.
- Invited Lecture at Netherlands Physical Society Yearly Meeting, Twente, May 91.
- Invited Lecture at Conference on "Chaos, Correlations and Complex Patterns", Copenhagen, Aug. 91.
- Invited Lecture at NATO ARW on "New Trends in Nonlinear Dynamics: Nonvariational Aspects", Estella, Spain, Sept. 91.
- Invited Lecture at Workshop on "Pattern Formation in Complex Systems", Ki-

takyushu, Japan, Sept. 91

- Lecture at NORDITA-ICTP Workshop on "Wrinkling of Surfaces in Nonlinear Systems", Trieste, July 1992.
- Invited Lecture at Conference on "Chaos and Fractals", Valencia, Spain, Sept. 1992.
- Invited Lecture at Conference on "Unstable and Turbulent Motion of Fluids", Kyoto, Japan, Oct. 1992.
- Lecture at NATO ASI on "Phase Transitions and Relaxation in Systems with Competing Energy Scales", Geilo, Norway, April 1993.
- Invited Lecture at NATO ARW on "Chaotic Advection and Diffusion", Alessandria, Italy, May 1993.
- Invited Lecture at NATO ASI on "Turbulence, Weak and Strong", Cargese, July 1993.
- Invited Lecture at Heraeus Conference on "Turbulence and Structure Formation in Continuous Dynamical Systems", Potsdam, Sept. 1993.
- Invited Lecture at "Nordic Non-Linear Days", Helsinki, Jan. 1994.
- Invited Lecture at Conference on "Interfaces", Chicago, Apr. 1994.
- Invited Lecture at "Annual Workshop on Statistical Mechanics", Aarhus, June 94.
- Invited Lecture at "IMACS 3rd International Conference on Computational Physics", Lyngby, Aug. 1994.
- Three invited Lectures at Summerschool on "Non-linear Dynamics in Geophysics", Bornoe, Sweden, Aug. 1994.
- Invited Lecture at "International Workshop on Nonlinear Dynamics, Fractality, and Selforganization of Complex Systems", Wurzburg, Oct. 1994.
- Invited contribution at conference on "Fractal Geometry and Self-Similar Phenomena", Curacao, Jan. 1995.
- Invited contribution at NATO ASI on "Physics of biomaterials: Fluctuations, self-assembly and evolution", Geilo, Mar. 1995.
- Invited lecture at conference on "Modern Dynamical Meteorology", Copenhagen, April 1995.
- Invited lecture at workshop on "Porous Materials: Structure and Transport", Danish Engineering Society, Copenhagen, May 1995.
- Invited lecture at "Dimension Theory and Dynamical Systems", American Mathematical Society, Seattle, June 1995.
- Invited contribution "Nonequilibrium Aspects of Extended Systems", Gordon Con-

ference, July 1995.

- Invited lecture at Conference on "Research and Communication", Copenhagen, August 1995.
- Invited lecture at Workshop on "Classical Statistical Mechanics with Special Emphasis on Nonlinear, Nonequilibrium and Disordered Systems", Torino, October 1995.
- Invited Lecture at conference "Physics Bridge", Lund, Apr. 96.
- Invited lecture at Conference on "Statistical Mechanics", Copenhagen, May 96.
- Invited lecture at Workshop on "Properties of Fibrous Compounds and Disordered Materials", Helsinki, June 96.
- Invited lecture at NATO ASI on "Turbulent Mixing", Cargese, July 96.
- Invited lecture at Conference celebrating Leo Kadanoff's 60th birthday, Chicago, Sept. 96.
- Invited Lecture at "Biophysics Day", Copenhagen, Oct. 1996.
- Invited Lecture at Conference on "Turbulence and Shell Models", Nice, Dec. 1996.
- Invited Lecture Course at "Sandbjerg Winter School", Jan. 97
- Invited speaker to conference on "Physics of Structurally Disordered Materials", Jyväskylä, Feb. 1997.
- Invited Lecture at Summer School "Turbulence: Fundamental Aspects and Geophysical Applications", Aosta, Italy, June 97.
- Invited Lecture at "Master Class in Physics", Copenhagen, Aug. 97.
- Invited Lecture at "Nordic Graduate Program", Copenhagen, Aug. 97.
- Invited Lecture conference on "Dynamics of Biological Systems", Copenhagen, Aug. 97.
- Invited Lecture at "Norwegian Physical Society Annual Meeting", Rondablikk, Norway, Sept. 97.
- Invited Lecture at conference on "Disorder and Chaos", Rome, Sept. 97.
- Invited Lecture at Network Meeting on "Statistical Mechanics in Disordered Systems", Copenhagen, Nov. 1997.
- Invited Lecture at Rutgers meeting on "Statistical Mechanics", Rutgers, Dec. 1997.
- Invited Lecture at conference on "Transport Processes in the Atmosphere and the Oceans", Porto, Apr. 1998.
- Invited Lecture at Gordon conference on "Fractals", Pisa, May 1998.

- Two invited Lectures at TAO conference on "Transport and Turbulence", Borneo, Sweden July 1998.
- Invited Lecture at conference and workshop on "The Physics of Turbulence", Dresden, Aug. 1998.
- Invited Lecture at Nordic Graduate Program, Copenhagen, Sept. 1998.
- Invited Lecture at Workshop on "Intermittency in Turbulence", Paris, Dec. 1998.
- Invited Lecture at Symposium on "Complexity in Physics" (Feder 60th birthday symposium), Oslo, Jan. 1999.
- Lecture at Nordita Symposium on "Biological Physics", Copenhagen, Feb. 1999.
- Invited lecture at program on "Application of Fractals", Cambridge, Feb. 1999.
- Invited Lecture on conference and school on "Turbulence: Theory, Experiments and Simulations", Israel, Feb. 1999.
- Two invited lectures at NATO ASI "Soft Condensed Matter: Configuration, Dynamics and Functionality", Geilo, Norway, Apr. 1999.
- Invited Lecture at conference on "Intermittency", Cambridge, June 99.
- Invited Lecture at "Dynamics Days Asia-Pacific on Nonlinear Science", Hong Kong, July 99.
- Invited Lecture at programme and conference on the "Physics of Hydrodynamic Turbulence", Santa Barbara, Feb. 2000.
- Invited Lecture at conference on "Intermittency in Turbulent Systems", Torino, Feb. 2000.
- Invited Lecture at conference on "Fractals", Sils, Switzerland, Mar. 2000.
- Two invited Lectures at summer school on "Modern Methods in Chemical Engineering", Aalborg University, Aug. 2000.
- Invited Lecture at Workshop on "New Results in Turbulence", Institute for Advanced Studies, Oct. 2000.
- Invited Lecture at European Geophysical Society XXVI General Assembly, Nice, Mar. 2001.
- Invited Lecture at "European Conference on Turbulence", Porto Apr. 2001.
- Three invited Lectures on NATO ASI on "Complexity from Microscopic to Macroscopic Scales: Coherence and Large Deviations", Geilo, Norway, Apr. 2001.
- Invited Contribution on program on "Statistical Physics and Biological Information", Santa Barbara, May 2001.

- Invited Lecture to Europhysics Conference on "Computational Physics", Aachen, Sept. 2001.
- Invited Lecture to International Conference in The Honor of Giovanni Paladin, Rome, Sept. 2001.
- Four Invited Lectures to Symposium "Nonlinear systems: Theory and Applications", Izmir, Turkey, Sept. 2001.
- Invited Lecture to conference on "Horizons in Complex Systems", Messina, Dec. 2001.
- Invited Lectures to program on "Developed Turbulence", Vienna, June 2002.
- Invited Lecture at conference on "Fractal Structures and Self-Organization", Capri, Italy, June 2002.
- Invited Lecture at conference "Dynamics Days Asian-Pacific", Hangzhou, China, Aug. 2002.
- Invited Lecture at workshop "FIRST EXIT PROBLEMS IN TURBULENCE, CLIMATE AND GENOMICS", Exystence, Torino, Nov. 2002.
- Invited Lecture at conference on "Dynamical Stochastic Modeling in Biology", MaPhySto, Copenhagen, Jan. 2003.
- Invited Lecture at the Geilo ASI on "Forces, Growth and Form in Soft Condensed Matter: At the Interface between Physics and Biology", Norway, Mar. 2003.
- Invited Lecture at Nordita Workshop on "Meeting and Mini-Symposium on Anomalous Dynamical Processes", May 2003.
- Invited Monitor at Gordon Conference on "Modern Developments in Thermodynamics", Pisa, Italy, May 2003.
- Invited Lecture at Aspen workshop on "Complex Networks in Biology: From Molecules to Neurons", Aspen, USA, May 2003.
- Invited Lecture at "Dynamics Days", Palma, Mallorca, Sept. 2003.
- Invited Lecture at Network Meeting on "Mixing and Stirring in Turbulence", Paris, Nov. 2003.
- Lecture at Institute "Kick-off Symposium", Copenhagen, Jan. 2004.
- Invited Lecture at Dynamics Days Asian Pacific, Singapore, June 2004.
- Lecture at StatPhys 22, Bangalore, India, July 2004.
- Invited Lecture at conference on "Nonideal turbulence", Nice, Oct. 2004.
- Invited participation on symposium on "Numbers and Nature", Rockefeller University, Dec. 2004.

- Lecture at Institute "Kick-off Symposium", Copenhagen, Jan. 2005.
- Lecture at the Opening of "BioNET", Royal Academy of Sciences, Copenhagen, Mar. 2005.
- Invited Lecture at the Geilo ASI on "Dynamics of Complex Interconnected Systems: Networks and Bioprocesses", Norway, April 2005.
- Invited Lecture at European Geophysics Union Meeting, Vienna, April 2005.
- Invited Lecture at Nordita Meeting "Complex Systems: Physics under The Midnight Sun", Tromsø, Norway, June 2005.
- Lecture at Institute "Kick-off Symposium", Copenhagen, Jan. 2006.
- Invited Lecture at The 8th Minerva Winter School, Weizmann Institute Of Science, Israel, Feb. 2006.
- Lecture at conference on "Physics on Socio-Economics Systems", Dresden, Mar. 2006.
- Invited Lecture at "International Conference on the Frontiers of Nonlinear and Complex Systems", Hong Kong, May 2006.
- Invited Lecture at conference on "Applications of Physics in Financial Analysis", Turin, Italy, June 2006.
- Invited Lectures at Summer School on "Quantitative Approaches to Gene Regulatory Systems", San Diego, July 2006.
- Invited Lecture at Conference and Workshop on "Stirring and Mixing", Leiden, The Netherlands, Aug. 2006.
- Invited Lecture on Erice conference on "Physics and Socio-Economics Phenomena", Erice, Italy, Sept. 2006.
- Invited Lecture at conference "Forum on the Frontier of Complexity Sciences", Beijing, Oct. 2006.
- Invited Lecture at Workshop on "Plastic Deformations", Oslo, Jan. 2007.
- Invited Member at Program on "Evolution of Molecular Networks", KITP, Santa Barbara, Jan. 2007.
- Invited Lectures at Danish National Bank and Nykredit, Feb. and March, 2007.
- Invited Lecture at Norwegian Physical Society for Physics Students, Trondheim, March 2007.
- Invited Lecture at NATO ASI on "Evolution from Cellular to Social Scales", Geilo, Norway, Apr. 2007.
- Lecture at "Statphys23", Genova, July 2007.

- Invited lecture at conference on "Planetary Emergencies and Climate Modelling", Erice, Aug. 2007.
- Invited eight-hour lecture course at "Beijing School on Complexity Science and Real-World Applications", Beijing, Sept. 2007.
- Invited lecture at workshop on "Computational Philosophy", Copenhagen, Oct. 2007.
- Invited lecture at workshop on "NF-kB Oscillations", Institute of Advanced Studies, Princeton, Nov. 2007.
- Invited five-hour lecture course at conference/workshop on "Turbulence", Bangalore, India, Jan. 2008.
- Invited lecture at workshop on "Physics and Biology of Morphogenesis", Santa Barbara, Mar. 2008
- Invited lecture at American Physical Society March meeting, New Orleans, Mar. 2008.
- Invited lecture at workshop on "Econophysics: Trends and Challenges", Copenhagen, May 2008.
- Invited lecture at CMG 2008 conference on "Flow, Fracture and Waves", Svalbard, Norway, June 2008.
- Invited lecture at "National Conference on Statistical Physics and Complex Systems Dedicated to Giovanni Paladin", Parma, Italy, June 2008.
- Invited lecture at conference on "Complexity", ECCS08, Jerusalem, Israel, Sept. 2008.
- Invited lecture at workshop on "Dynamics on and of Complex Networks", Jerusalem, Israel, Sept. 2008.
- Invited lecture a "70th Anniverssary of Jens Feder Symposium", Oslo, Jan. 2009.
- Invited ten hour lecture course on "Turbulence, Intermittency and Scaling", Fukuoka, Japan, Feb. 2009.
- Invited keynote lectures at Geilo ASI on "Order, Robustness and Instabilities in Complex Systems", Geilo, Norway, Mar. 2009.
- Invited Lecture at Conference and Summer school on "Complexity in Physics and Biology", Chengdu, China, July 2009.
- Invited Lecture at workshop on "Statistical Mechanics of Molecular and Cell Biology", Warwick, Sept. 2009.
- Invited Lecture at workshop on "Dynamics on and of Complex Networks III", Warwick, Sept. 2009.

- Invited Lecture at conference on "Euromech Colloquium on the Small Scale Turbulence", Turin, Oct. 2009.
- Invited lecture at conference on "Breaking Barriers - From Physics to Biology", Bangalore, India, Jan. 2010.
- Invited member at program on "Evolutionary Perspectives on Mechanisms of Cellular Organization", Santa Barbara, Feb. 2010.
- Invited lecture at meeting on "Complexity in Biological Systems", Middelfart, Denmark, March 2010.
- Invited lecture Nordic Workshop on "Statistical Physics: Biological, Complex and Non-equilibrium Systems", Stockholm, March 2010.
- Invited lecture on conference on "Clocks, Switches and Signals", Warwick, England, June 2010
- Invited lecture at conference on "Computational Physics, CCP2010", Trondheim, Norway, June 2010.
- Invited lecture at conference on "Aging and Cancer", Beijing, July 2010.
- Invited lecture at conference on "Statistical Physics 2010", Hong Kong, July 2010.
- Invited lecture at conference on "Application of Control Theory and Optimization Techniques in Biochemical Pathways", Hyderabad, India, Aug. 2010.
- Invited lecture to workshop on "Genome Maintenance and Consequences", Copenhagen, Sept. 2010.
- Invited lecture at conference "iTi on Turbulence", Bertinoro, Italy, Sept. 2010.
- Invited Lecture at conference on "EXTREMES 2010: International Workshop in Recent Achievements on the Study of Extreme Events", Potsdam, Sept. 2010.
- Invited lecture at SIAM conference on "Applications of Dynamical Systems: Genetic Networks", Salt Lake City, May 2011.
- Invited lecture at conference on "Mathematical Biology", Bangalore, July 2011.
- Invited lecture at workshop on "Signals and Space", Copenhagen, Aug. 2011.
- Invited keynote lecture at workshop on "Synthetic Turbulence", London, Sept. 2011.
- Invited lecture at conference "The solar course, the chemic force, and the speeding change of water", Stockholm, Oct. 2011.
- Invited lecture at conference "March Complex Meeting", Havana, Cuba, March 2012.
- Invited lecture at conference on "Experimental Chaos and Complexity", Ann Arbor, Michigan, May 2012.

- Invited lecture at workshop on "Soft Matter Physics and Complex Flows", Lofoten, May 2012.
- Invited lecture at conference on "Delayed Complex Systems", Palma, Spain, June 2012.
- Invited lecture at conference on "Networks in Biology, Social Sciences and Engineering", Bangalore, India, July 2012.
- Invited plenary lecture at "Dynamics Days", Gotherburg, Sweden, Sept. 2012.
- Invited lecture at "Cutting Edge Biophysics", Tallberg, Sweden, Sept. 2012.
- Invited lecture at "Oscillations, thresholds and bistability in cellular regulatory networks", Brussels, Sept. 2012.
- Invited lecture at "Leo-FEST: From Condensed Matter to Biological Physics", Chicago, Oct. 2012.
- Invited lecture at Workshop on "Complex Flows and Turbulence", Recife, Brazil, Dec. 2012.
- Invited lecture at "Cooperation and the Evolution of Multicellularity", Santa Barbara, Jan. 2013.
- Invited lecture at "Soft Matter Confinement: From Biology to Physics", Geilo, Norway, March 2013.
- Invited lecture at Rutgers meeting on "Statistical Mechanics", Rutgers, May 2013.
- Invited lecture at conference on "Statistical Mechanics of Biological Cooperativity", Aaland, Finland, May 2013.
- Invited lecture at conference on "Perspective in Non-Linear Dynamics", Hyderabad, India, July 2013.
- Invited plenary lecture at "XIII LATIN AMERICAN WORKSHOP ON NONLINEAR PHENOMENA", Corboda, Argentina, Oct. 2013.
- Invited lecture at "Symposium on Creativity in Science celebrating Bohr atomis model", Copenhagen, Oct. 2013.
- Invited lecture at conference on "Physics of Evolution, Regulation and Signaling", Munich, February 2014.
- Invited lecture at Nordic workshop on "Statistical Physics: Biological, Complex and Non-Equilibrium Systems", Stockholm, March 2014.
- Invited lecture at conference "Breaking the barriers: From Physics to Biology", Xian, China, June 2014.
- Invited plenary lecture at "Dynamics Days Asia Pacific", Chennai, India, July 2014.

- Invited lecture at "International Conference on Control of Self-Organizing Nonlinear Systems", Warnemunde, Germany, Aug. 2014.
- Invited lecture at workskop on "Rhythms in complex networks", Copenhagen, Sep. 2014.
- Invited lecture on conference "Strolling on Chaos, Turbulence and Statistical Mechanics", Rome, Sep. 2014.
- Invited lecture at Granada Seminar on "Physics Meets the Social Sciences", Granada, Spain, June 2015.
- Invited lecture at workshop on "Mathematical Trends in Reaction Network Theory", Copenhagen, July 2015.
- Invited plenary Lecture at conference on "Challenges in Data Science: a Complex Systems Perspective, Turin, Oct. 2015.
- Invited lecture at "Biological Oscillators: Design, Mechanism, Function", EMBL, Heidelberg, Nov. 2015.
- Invited lecture at "Complex Systems Approach to Self-Organization", Chennai, India, Feb. 2016.
- Invited lecture at "Dynamics and information processing: from cells to tissues", Les Houches, France, Mar. 2016.
- Invited lecture at "The 7th Nordic Workshop on Statistical Physics: Biological, Complex and Non-Equilibrium Systems", Stockholm, Mar. 2016.
- Invited lecture at "Dynamics of the Markets", Stockholm, June 2016.
- Lectures at workshop on "Earth Patterns", Blesle, France, July 2016.
- Invited plenary lecture at "Perspectives in Non-Linear Dynamics", Berlin, July 2016.
- Invited lecture at "17th International Conference on Systems Biology", Barcelona, Sept. 2016.
- Invited lecture at "Kadanoff Memorial Meeting", Chicago, Oct. 2016.
- Invited lecture at workshop on "Statistical Mechanics and Turbulence", Rome, Nov. 2016.
- Invited lecture at "Dynamics Days Asia-Pacific 2016", Hong Kong, Dec. 2016.
- Invited lecture at NIMS workshop, Seoul, Korea, May 2017.
- Invited lecture at workshop "Fractures and Flows in Porous Media", Blesle, France, June 2017.
- Invited lecture at "Nordita Masterclass", Nordita, August 2017.

- Invited lecture at "Transitions to Turbulence", Copenhagen, Sept. 2017.
- Invited lecture at programme and conference on "Memory Formation in Matter", Kavli Institute of Theoretical Physics, UC Santa Barbara, Jan. 2018.
- Invited lecture at "Coupled Oscillators in Biology", Harvard Medical School, Jan. 2018.
- Invited lecture at winter school on "Evolution of Diversity", Les Houches, France, Feb. 2018.
- Invited lecture at conference on "Nordic cancer", Stockholm, May 2018.
- Invited lecture at DAWN workshop on "Cosmology", Copenhagen, August 2018.
- Invited lecture at conference on "Advances in Pattern Formation: New Questions Motivated by Applications", Ben Gurion University, Israel, Feb. 2019.
- Invited lecture at 'Nordic Workshop on Ststistical Physics: Biological, Complex and Non-Equilibrium Systems, Nordita, Stockholm, March 2019.
- ' Invited lecture at workshop on "Computational Mathematical Modeling", Geilo, Norway, March 2019.

General Colloquia and Seminars.

- 1985: Ann Arbor.
- 1986: Purdue, Chicago, Helsinki.
- 1987: Technical University (MIDIT), Julich, Nordita, Chicago.
- 1988: Ørsted Institute, Linkøping, Århus, Technical University (Geophysics), Chicago.
- 1989: IBM (Norway), Niels Bohr Institute.
- 1990: Odense, Stockholm, Technical University (Physics), Rome I.
- 1991: Paris, Gteborg, Chicago, Boston, Amsterdam.
- 1992: Rome II, Firenze, Nordita.
- 1993: Chicago, Princeton, Reykjavik.
- 1994: Cagliari.
- 1995: Torino, Rome.
- 1996: Rome.
- 1997: Weizmann, Israel.
- 1998: DTU, Lyngby.
- 2000: North Western, University of Chicago (twice), Lund University.

- 2002: Oslo.
- 2003: London, Odense, Trondheim, Milano.
- 2004: Stockholm.
- 2005: Madrid, San Francisco, San Diego.
- 2007: Danish National Bank, SEB Bank, Nykredit Bank (four times), Rockefeller University.
- 2008: Technical University of Denmark, Baptist University of Hong Kong, Chinese University of Hong Kong.
- 2009: San Diego, Fukuoka (eight lectures), Potsdam, BRF kredit.
- 2010: Georgia Tech, Atlanta, Aarhus, LIFE, Copenhagen, Nordita, Stockholm, Houston, Chicago.
- 2011: ENS, Paris, Saclay, Paris, NCBS, Bangalore, NIA, Baltimore, ENS, Lyon, Physics, Harvard, Systems Biology, Harvard, Finance Council, Copenhagen, DIKU, Copenhagen University, Delhi University, Economics Institute, Copenhagen.
- 2012: Recife, Brazil.
- 2013: Stanford, Warwick (two lectures).
- 2014: UCLA, Paris (ESPCI), ENS, Paris, Univ. of Chicago (Twice).
- 2015: Fukuoka, Japan (twice), UPF, Barcelona, Roskilde University, Stockholm University, Peking University, Computational Science Research Center, Beijing.
- 2017: Nice, MRC, LMB, Cambridge.
- 2018: University of California Santa Barbara, Harvard Medical School, Oxford University, Rome University, Okinawa, Japan, Oslo University.
- Beijing University.