0.0.1 Prof. Dr. Christian Holm

Born on May 3, 1960. Male.

University of Stuttgart
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Professor (W3)

Academic education with degree

1983-1985 Physics, Georgia Institute of Technology, M.Sc. (D. Finkelstein)

1979–1983 Physics, TU Berlin, Vordiplom

Scientific degrees

1996 Habilitation degree in Theoretical Physics, FU Berlin (H. Kleinert)

1987 Doctoral degree in Physics, Georgia Institute of Technology, USA (D. Finkelstein)

Professional career (starting from first university degree)

since 2009 Director, Institute for Computational Physics, University of Stuttgart

2005–2008 Fellow, Frankfurt Institute for Advanced Studies (FIAS)

1998–2008 Group leader, Max Planck Institute for Polymer Research

1996-1998 Postdoc, Max Planck Institute for Polymer Research

1991–1996 Research associate, FU Berlin

1988–1991 Postdoctoral fellow, TU Clausthal

Internal and External Positions, Miscellanea

since 2016 Fellow of the Stuttgart Centre for Simulation Sciences (SC SimTech)

2012–2018 Spokesman of the SFB 716 “Dynamic simulation of systems with large particle numbers”, University of Stuttgart

since 2010 Principal investigator of the Cluster of Excellence “Simulation Technology”

since 2008 Editorial board member for Macromolecular Theory and Simulation

Awards and Recognitions

2006 Full professorship in Theoretical Physics at the Jacobs Univsersity in Bremen (declined)

2003 Third prize of the Heinz Billing Association for the ESPResSo software package

1988–1991 DFG Postdoc Stipend

1983–1984 Fulbright Stipend

1983 World Student Fund Scholar

Peer-Reviewed Publications

[1] A. Arnold, O. Lenz, S. Kesselheim, R. Weeber, F. Fahrenberger, D. Röhm, P. Košovan, and C. Holm. "ESPResSo 3.1 — Molecular Dynamics Software for Coarse-Grained Models". In: *Meshfree Methods for Partial Differential Equations VI*. Ed. by M. Griebel and M. A. Schweitzer. Vol. 89. Lecture Notes in Computational Science and Engineering. Springer Berlin Heidelberg, 2013, pp. 1–23. DOI: 10.1007/978-3-642-32979-1_1. URL: http://www.springer.com/mathematics/computational+science+%5C%26+engineering/book/978-3-642-32978-4.

[2] M. Deserno and C. Holm. "How to mesh up Ewald sums. I. A theoretical and numerical comparison of various particle mesh routines". In: *J. Chem. Phys.* 109 (1998), p. 7678.

[3] M. Deserno, C. Holm, and S. May. "The fraction of condensed counterions around a charged rod: comparison of Poisson-Boltzmann theory and computer simulations". In: *Macromolecules* 33 (2000), pp. 199–206.

[4] F. Dommert, K. Wendler, R. Berger, L. D. Site, and C. Holm. "Force Fields for Studying the Structure and Dynamics of Ionic Liquids: A Critical Review of Recent Developments". In: *ChemPhysChem* 13.7 (2012), pp. 1625–1637. ISSN: 1439-7641.

[5] C. Holm and J.-J. Weis. "The structure of ferrofluids: a status report". In: *Curr. Opin. Colloid Interface Sci.* 10 (2005), pp. 133–140.

[6] S. Kesselheim, W. Müller, and C. Holm. "Origin of Current Blockades in Nanopore Translocation Experiments". In: *Physical Review Letters* 112 (1 Jan. 2014), p. 018101.

[7] H. J. Limbach, A. Arnold, B. A. Mann, and C. Holm. "ESPResSo – an extensible simulation package for research on soft matter systems". In: *Comp. Phys. Comm.* 174.9 (May 2006), pp. 704–727.

[8] R. Messina, C. Holm, and K. Kremer. "Strong attraction between charged spheres due to metastable ionized states". In: *Phys. Rev. Lett.* 85 (2000), pp. 872–875.

[9] U. Micka, C. Holm, and K. Kremer. "Strongly Charged, flexible polyelectrolytes in poor solvents - a molecular dynamics study". In: *Langmuir* 15 (1999), p. 4033.

[10] Z. Wang, C. Holm, and H. W. Müller. "Molecular dynamics study on the equilibrium magnetization properties and structure of ferrofluids". In: *Phys. Rev. E* 66 (2002), p. 021405.