

Sigbjørn Løland Bore

Curriculum Vitae

Born: 11 August 1990, Stavanger, Norway
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Education

2015–now	PhD fellow , Hylleraas Center at the University of Oslo (UiO). Title Supervisor
	<i>Advances in the Hybrid Particle-Field Approach: Towards Biological Systems</i> Prof. Michele Casella
2009–2012	Masters in applied physics , Norwegian University of Science and Technology (NTNU).
2014–2015	Masters in complex systems , Université Pierre-et-Marie-Curie (UPMC).
Title Supervisors	<i>High-Resolution Large Time-Step Schemes for Hyperbolic Conservation Laws</i> Assoc. Prof. Jon Andreas Støvneng and Dr. Tore Flåtten.
Title Supervisor	<i>Collective motion of dynamic spins</i> Dr. Olivier Dauchot.

Experience

2015–2018	Lab instructor and examinor in physical chemistry (KJM1130) Computer lab instructor and examinor in molecular modelling (KJM5630) .
2013	Summer internship, The Curie Institute, Paris Title <i>Stochastic modeling of memory effects on the Hunchback gene activation in the fruit fly embryo</i>
2011	Conversion of handwritten fluid mechanics compendium to latex for Prof. Iver Brevik

Skills

Languages:	Norwegian (first language), English (fluent), French (B2-level).
Programming:	FORTRAN, PYTHON, C++, MATLAB.
Markup:	HTML, L ^A T _E X, Tikz.
Software:	GROMACS, NAMD, VMD, LAMMPS.
Supercomputing:	SLURM, PBS, SHELL-scripting, openMP, MPI.

Awards

- 1st place in Gløsmesterskapet. Engineering knowledge competition between all study programs at NTNU.

Scientific Papers

7. **SLB**, H.B. Kolli, A. De Nicola, M. Byshkin, T. Kawakatsu, G. Milano, M. Cascella, *Hybrid Particle-Field Molecular Dynamics Under Constant Pressure*, [arXiv \(2020\)](#).
 6. **SLB**, T. Flätten, *High-resolution large time-step schemes for inviscid fluid flow*, [Appl. Math. Model.](#) **81**, 263–278 (2020).
 5. A. De Nicola, T.A. Soares, D.E.S. Santos, **SLB**, G.J.A. Sevink, M. Cascella and G. Milano *Aggregation of Lipid A Variants: a Hybrid Particle-Field Model*, [Biochim. Biophys. Acta](#), in press (2020)
 4. **SLB**, H.B. Kolli, T. Kawakatsu, G. Milano, M. Cascella, *Mesoscale electrostatics driving particle dynamics in non-homogeneous dielectrics*, [J. Chem. Theory Comput.](#) **15**, 2033–2041 (2019).
 3. H.B. Kolli, A. De Nicola, **SLB**, K. Schäfer, G. Diezemann, J. Gauss, T. Kawakatsu, Z. Lu, Y. Zhu, G. Milano, M. Cascella, *Hybrid Particle-Field Molecular Dynamics Simulations of Charged Amphiphiles in Aqueous Environment*, [J. Chem. Theory Comput.](#) **14**, 4928–4937 (2018).
 2. **SLB**, G. Milano, M. Cascella, *Hybrid Particle-Field Model for Conformational Dynamics of Peptide Chains*, [J. Chem. Theory Comput.](#) **14**, 1120–1130 (2018).
 1. **SLB**, M. Schindler, K.N.T. Lam, E. Bertin, O. Dauchot, *Coupling spin to velocity: collective motion of Hamiltonian polar particles*, [J. Stat. Mech.: Theory Exp](#) **3**, 033305 (2016).
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Selected Scientific Presentations

5. *Hybrid Particle-Field Molecular Dynamics Under Constant Pressure*, invited talk, Norwegian Chemical Society, Annual Meeting in Quantum and Computational Chemistry, Trondheim, Norway (2019)
 4. *Molecular dynamics in a density dependent inhomogeneous dielectric*. Presentation at the National meeting of Norwegian Chemical Society, Lillestrøm, Norway (10.2018).
 3. *Hybrid Particle-Field Model for Conformational Dynamics of Peptide Chains*. Poster presentation at CECAM workshop, University of Trento, Italy (08.2018).
 2. *Coarse graining of protein backbone*. CTCC-seminar, Oslo, Norway (05.2016).
 1. *Coarse grained models for proteins*. Presentation at the spring meeting of CTCC, Alta, Norway (04.2016).
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Selected Writings in Norwegian

8. *I anledning telefonkioskens dag*, opinion piece, Aftenbladet, (2020)
7. *Den hellige treenigheten*, back cover causerie, Klassekampen, (2019)
6. *Hverdagshykleri*, opinion piece, Aftenbladet, (2018)
5. *Øyblikket da du blir voksen*, back cover causerie, Klassekampen, (2018)
4. *Hund på bar*, back cover causerie, Klassekampen, (2018)
3. *Ukultur hos havets kardinaler*. back cover causerie, Klassekampen, (2018)
2. *Glem ikke å sette opp ølteltet*, opinion piece, Universitas, (2017)
1. *Make Frederikke greit again*, opinion piece, Universitas, (2016)