Curriculum vitae

Personal Information

FIRST NAME / SURNAME	Dr. Tatiana Morozova
DATE OF BIRTH	24.12.1992
NATIONALITY	Russian
CIVIL STATUS	married
EMAIL	tatiana.morozova@ens-lyon.fr

Education

DATES	Mar. 2016 - Oct. 2019
QUALIFICATION PROGRAM	**Ph.D. in Physics**. Thesis on “Polymers and Polymer Colloids in Solvent Mixtures”, under the supervision of Dr. A. Nikoubashman
INSTITUTION	Johannes Gutenberg University, Mainz, **Germany**
DATES	Sept. 2010 - Jan. 2016
QUALIFICATION AWARDED	**Specialist in Physics** (higher education program in Condensed Matter Physics equaled a Master's Degree). Thesis on “Computer Simulation of Mechanical Properties of Polyelectrolyte Micro- and Nanocapsules”, under the supervision of Prof. Dr. O. I. Vinogradova
INSTITUTION	Lomonosov Moscow State University, Moscow, **Russia**
DATES	Sept.1999 - Jun. 2010
QUALIFICATION AWARDED	**High school Diploma**
INSTITUTION	Gymnasium № 1519, Moscow, Russia

Work Experience

DATES	Dec.2024- *present*
POSITION	**Permanent** researcher (Chargée de Recherche)
INSTITUTION	CNRS, Physics Laboratory at ENS Lyon, Lyon, **France**
DATES	Dec. 2023 - Nov.2024
POSITION	**Postdoctoral** researcher
INSTITUTION	CNRS, Institut Pasteur, Paris, **France**
DATES	Oct. 2020 - Nov. 2023
POSITION	**Postdoctoral** researcher
INSTITUTION	Institut Max von Laue - Paul Langevin (ILL), Grenoble, **France**
DATES	Nov. 2019 - Sept. 2020
POSITION	**Postdoctoral** researcher
INSTITUTION	LIPhy, CNRS, University Grenoble Alpes, Grenoble, **France**
DATES	Mar. 2016 - Oct. 2019
POSITION	**Ph.D.** student
INSTITUTION	Johannes Gutenberg University, Mainz, **Germany**

Teaching Experience

DATES Winter semester 2017/2018 & Summer semester 2018
POSITION **Teaching assistant** for the course “Mathematics for Physicists”
INSTITUTION Johannes Gutenberg University, Mainz, Germany

DATES Summer semester 2016
POSITION **Teaching assistant** for the course “Advanced Statistical Physics”
INSTITUTION Johannes Gutenberg University, Mainz, Germany

Research Visits

DATES July 2022
PURPOSE Collaborative visit to Dr. A. Deblais
INSTITUTION Institute of Physics, University of Amsterdam, **Netherlands**

DATES June - July 2017
PURPOSE Experimental project on fabrication of polymer colloids in the research groups of A.Z. Panagiotopoulos, R.K. Prud’homme, R.D. Priestley
INSTITUTION Department of Chemical and Biological Engineering, Princeton University, **USA**

Skills and Competences

LANGUAGES SPOKEN Russian (native), English (fluent), French (B1), German (intermediate)
PROGRAMMING C/C++, Python
SIMULATION SOFTWARE HOOMD-Blue, GROMACS, PyEmma, PLUMED, AlphaFold

Organisation of Scientific Events

DATES Jul. 2021 - Oct. 2023
ROLE **College secretary** of the Theory Group - organisation of seminars & group activities, research visits, and workshops at ILL

DATES Feb. - Oct. 2020
ROLE **Organizer** of group **seminars** of the Statistical Physics and Modeling team (LIPhy, UGA/CNRS)

DATES Oct. 2018 - Oct. 2019
ROLE **Ph.D. student representative** - organisation of seminars

DATES May 2019
ROLE **Organization** of the graduate students (CRC TRR146) retreat (5 days, Amsterdam, Netherlands)

Fundings Raised

DATES 2025

NAME **Jeunes Chercheuses et Jeunes Chercheurs** (JCJC) strating grant for young scientists based in France (ANR): "*In silico: Disordered Proteins in Cells and Bio-Inspired Materials*" (240, 000 €).

DATES 2024

NAME **Marie Skłodowska-Curie Action** (MSCA) Europeen Postdoctoral Fellowships, project: "In silico modeling of multi-domain proteins in biological condensates" (231, 000 €). *Declined* for the permanent research position at CNRS.

DATES 2022 - 2025

NAME Franco(**ANR**)-German(**DFG**) project: "Dynamics, kinetics and assembly of model intrinsically disordered proteins from a polymer physics perspective" in collaboration with F. Schreiber, M. Oettel, J.-L. Barrat, O. Matsarskaia, T. Seydel (650, 000 €).

DATES 2020 - 2026

NAME **Computational time** at the French national cluster facilities IDRIS (CNRS) (300, 000 GPU hours granted ~ 110, 000 €)

DATES 2017

NAME Research visit **travel grant** from the IRTG graduate school (CRC TRR146) at the Johannes Gutenberg University Mainz (3, 000 €)

Publications

(1) **T.I. Morozova** and A. Nikoubashman: Coil-globule collapse of polystyrene chains in tetrahydrofuran-water mixtures, ***J. Phys. Chem. B*** 122, 2130 (**2018**)

(2) **T.I. Morozova**, V.E. Lee, A.Z. Panagiotopoulos, R.K. Prud'homme, R.D. Priestley and A. Nikoubashman: On the stability of polymeric nanoparticles fabricated through rapid solvent mixing, ***Langmuir*** 35, 709 (**2019**)

(3) **T.I. Morozova** and A. Nikoubashman: Surface activity of soft polymer colloids, ***Langmuir*** 35, 16907 (**2019**)

(4) **T.I. Morozova**, V.E. Lee, N. Bizmark, S.S. Datta, R.K. Prud'homme, A. Nikoubashman, R.D. Priestley: In silico design enables the rapid production of surface-active colloidal amphiphiles, ***ACS Cent. Sci,*** 6, 166 (**2020**)

(5) **T.I. Morozova**, N.A. Garcia, J.-L. Barrat, G.S. Luengo, F. Leonforte: Adsorption and desorption of polymers on bio-inspired chemically structured substrates, ***ACS Appl. Mater. Interfaces***, 13, 25, 30086–30097 (**2021**)

(6) **T.I. Morozova**, N.A. Garcia, J.-L. Barrat: Temperature dependence of thermodynamic, dynamical, and dielectric properties of water models, ***J. Chem. Phys.***, 156 (12), 126101 (**2022**)

(7) M.R. Bittermann, **T.I. Morozova**, S.F. Velandia, A. Deblais, S. Woutersen, D. Bonn: Surface-mediated molecular transport in polydisperse oil-in-water emulsions, ***Langmuir***, 39, 12, 4207-4215 (**2023**)

(8) **T.I. Morozova**, N.A. Garcia, O. Matsarskaia, F. Roosen-Runge, J.-L. Barrat: Structural and Dynamical Properties of Elastin-Like Peptides near Lower Critical Solution Temperature, ***Biomacromolecules*** 24, 4,1912-1923 (**2023**) - **top twelve publications** by researchers at the ILL (ILL *Highlights* 2023)

(9) I. Adroher-Benítez, **T.I. Morozova**, N.A. Garcia, J.-L. Barrat, G.S. Luengo, F. Leonforte: Modeling the adsorption of copolymers on heterogeneous surfaces and the stability of polymer coatings for cosmetic applications, ***Macromolecules***, 56, 24, 10285-10295 (**2023**)

(10) **T.I. Morozova**, N.A. Garcia, J.-L. Barrat: Sequence length controls coil-to-globule transition in elastin-like polypeptides, ***J. Phys. Chem. Lett.*** ,15, 10757-10762 (**2024**)

(11) S. Chakraborty, **T.I. Morozova**, J.-L. Barrat: Intrinsically disordered proteins can behave as different polymers across their conformational ensemble, ***J. Phys. Chem. B,*** 129, 2359-2369 (**2025**)

(12) V. Schnapka, **T. I. Morozova**, S. Sen, and M. Bonomi, "Atomic resolution ensembles of intrinsically disordered and multi-domain proteins with Alphafold", (**2025**)

(13) S. Sen, S. E. Hoff, **T. I. Morozova**, V. Schnapka, and M. Bonomi, "*Advancing in silico drug design with Bayesian refinement of AlphaFold models*", submitted to ***J. Chem. Theory Comput.*** (**2025**)

Talks and Posters

Seminar: Laboratoire de Physique ENS de Lyon, Lyon, **2023**: "*Thermoresponsive polypeptides: insights polymer physics*"

Seminar: Laboratoire de biochimie théorique, IBPC, Paris, **2023**: "*Phase behaviour of thermo-responsive polypeptides*"

Seminar: ICS Strasbourg, Strasbourg, **2022**, *Structural and Dynamical Properties of Elastin-Like Peptides near Lower Critical Solution Temperature*

Seminar: Thematics School in Soft Condensed Matter (Univ, Grenoble Alpes) **2021**, *Fabrication of Polymer Colloids through Rapid Solvent Exchange*

Seminar*:* University of Pennsylvania **2019***, Computer simulations of controlled fabrication of polymer colloids through the rapid solvent exchange*

Invited Talk: conference FisMat **2025** (Venice, Italy): *Disordered proteins: insights from polymer physics*

Contributed Talk: CECAM workshop: Frontiers of Coarse-Grained Models: From New Developments to Modeling Dynamics,

Assemblies, and Macromolecular Machines, Lyon (France), **2024**: *Thermo-responsive polypeptides: insights from polymer physics*

Contributed Talk: 28th International Conference on Statistical Physics (Statphys28), Tokyo (Japan), **2023**: *Coil-to-globule transition of thermoresponsive polypeptides*

Contributed Talk: Spring meeting of the American Chemical Society (online) **2021**, *Polymer adsorption on bio-inspired disordered substrate*

Contributed Talk: Spring meeting of the DPG, Regensburg (Germany) **2019**, *Fabrication of polymeric Janus nanoparticles and their behaviour at the liquid-liquid interfaces - a simulation study*

Contributed Talk: Spring meeting of the DPG Berlin (Germany) **2018**, *Polymer self-assembly into nanoparticles through rapid solvent exchange in organic media*

Contributed Talk: 91st ACS Colloid&Surface Science Symposium, New York City (USA) **2017**, *Atomistic simulations of the coil-globule transition of polystyrene chains in solution*

Contributed Talk: Spring meeting of the DPG, Dresden (Germany) **2017**, *Controlled fabrication of nanoparticles through rapid solvent exchange*

Poster: CECAM workshop: Development of Coarse-Grained Models Lyon (France) **2022**, *Adsorption and desorption of polymers on bio-inspired chemically heterogeneous surfaces*

Poster: Les Houches-TSRC Protein Dynamics Workshop, Aussois (France) **2022**, *Structural and dynamical properties of elastin-like peptides near lower critical solution temperature*

Poster: CECAM workshop: From disordered biomolecular complexes to biological coacervates, Zurich (Switzerland) **2022**, *Structural and dynamical properties of elastin-like peptides near lower critical solution temperature*

Poster*: 5th* Edwards Symposium, Cambridge (UK/online) **2021**, *Adsorption and desorption of polymers on bio-inspired chemically heterogeneous surfaces* - **poster prize**

Poster: 3rd Edwards Symposium, Cambridge (UK) **2018,** *Fabrication of Janus nanoparticles from the self-assembly of homopolymers and amphiphiles through rapid precipitation*

Poster: CECAM workshop “Collective behaviour of soft and active matter under confinement”, Mainz (Germany) **2018**, *Fabrication of Janus nanoparticles from the self-assembly of homopolymers and amphiphiles through rapid precipitation*