

Curriculum Vitae

Dr. Maikel Christian Rheinstädter

May 2nd, 2019

Business Address

Department of Physics and Astronomy
McMaster University
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Founder: Synth-Med Biosensors

www.synth-med.com

Current Status at McMaster

Full Professor, tenured, Department of Physics and Astronomy

Educational Background

2002: Doctor of Natural Sciences (Magna cum Laude), Saarland University, Supervisor K. Knorr
1997: Diplom Physik, with distinction, Saarland University, Supervisor M. Enderle (M.Sc.)
1994: Vordiplom Mathematik, Saarland University (B.Sc. Mathematics)
1993: Vordiplom Physik, Saarland University (B.Sc. Physics)
1991: Abitur (general qualification for university entrance), with distinction

Professional Organizations

Biophysical Society, American Physical Society, Canadian Association of Physicists, German Physical Society, German Biophysical Society

Employment History

2018-2021: Associate Chair–Graduate Studies, Department of Physics and Astronomy, McMaster University, Hamilton, ON, Canada
2018-present: Full Professor with tenure, Department of Physics and Astronomy, McMaster University, Hamilton, ON, Canada
2016/2017: Research leave to set up the Origins of Life Laboratory at McMaster
2015–present: Associate Director, Origins Institute, McMaster University, Hamilton, ON, Canada
2013–2018: Associate Professor of Physics, Department of Physics and Astronomy, McMaster University, Hamilton, ON, Canada
2009: Visiting Professor, Departamento de Fisica de la Pontificia Universidad Católica de Chile, Santiago de Chile, Chile
2009–2013: Assistant Professor of Physics, Department of Physics and Astronomy, McMaster University, Hamilton, ON, Canada
2006–2008: Assistant Professor of Physics, Department of Physics and Astronomy, University of Missouri-Columbia, Columbia, MO, U.S.A.
2005–2006: Visiting Scientist, Institut for X-ray Physics, Georg-August Universität Göttingen, Göttingen, Germany with T. Salditt
2004–2006: Staff Scientist, Institut Laue-Langevin, Grenoble, France, Instrument Responsible IN11, Supervisor: H. Schober

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- 2002–2004: Postdoctoral Research Associate, Forschungszentrum Jülich, Germany and Institut Laue-Langevin, Grenoble, France, Instrument Responsible IN22, Supervisor: D. Richter
- 1998–2000: Software engineer, freelancer, Dialogika GmbH, Dudweiler, Germany
- 1997–2002: Research Assistant, Saarland University, Saarbrücken, Germany, Supervisor: K. Knorr

Scholarly and Professional Activities

- 2019 International Advisory Committee "*BILL 2019 Bilayers at the ILL*", International Workshop, Institut Laue-Langevin, Grenoble, France.
- 2019 Guest Editor, Special Issue "*Current state of Membrane Science*", Chemistry and Physics of Lipids
- 2018-2021 Director of Science Policy, Board of Directors, Canadian Association of Physicists CAP
- 2016-2019 Member of the Scientific and Technical Advisory Panel for Spectroscopy for the European Spallation Source ESS, Lund, Sweden
- 2016-2019 Member of the Steering Board of "SYNERGY – Investigating the Potential of the Protein-Membrane Co-Structural Dynamics as a New Therapeutic Avenue", Niels Bohr Institute, University of Copenhagen.
- 2016–2019: Member, Canadian National IUPAP Liaison Committee (CNILC)
- 2015-2016 Member of NSERC Physics Research Tools and Instruments (RTI) Review Committee
- 2015-2016 Member of Canadian Association of Physicists CAP Science Policy Committee
- 2015-2017 Editorial Board Member, *Membranes*, MDPI
- 2015 Guest Editor, Special Issue "Membrane Structure and Dynamics", *Membranes*
- 2015–2016: Member, Canadian National IUPAP Liaison Committee (CNILC)
- 2014–2015: Chair, Division of Medical and Biological Physics (DMBP), Canadian Association of Physicists CAP
- 2014–2015: Member, CAP Advisory Council, Canadian Association of Physicists
- 2013–2016: Member, Scientific Council, Canadian Institute for Neutron Scattering CINS
- 2013–2014: Vice Chair, Division of Medical and Biological Physics (DMBP), Canadian Association of Physicists CAP
- 2010–2013: Member of the Science Review Committee for the Oak Ridge National Laboratory's (ORNL) neutron scattering facilities
- 2009–2018: CNBC Chalk River Proposal Review Coordinator for "Soft Materials"

Conference Organization

- Organizer, "Membranes Beyond" International Workshop, July 2-4, 2018, McMaster University, Hamilton ON, Canada
- Session Organizer, American Crystallographic Association Annual Meeting, Session: "Scattering Strategies in Biomembrane Research", July 20-24, 2018, Toronto, ON, Canada
- Co-Organizer, Science of Early Life International Conference, June 24-27, 2018, McMaster University, Hamilton, ON, Canada

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- Organizer, Canadian Institute for Neutron Scattering Annual General Meeting (CINS-AGM), October 14-15, 2016, McMaster University, Hamilton, ON, Canada
- Program committee member and Section Organizer, Biology, American Conference on Neutron Scattering (ACNS), Long Beach, CA, July 10-14, 2016.
- Program Chair, Division of Medical and Biological Physics, CAP Congress, June 15-19, 2015, University of Alberta, Edmonton, Alberta.
- Organizer, Canadian Institute for Neutron Scattering Annual General Meeting (CINS-AGM), October 25-26, 2013, McMaster University, Hamilton, ON, Canada
- Organizer, SoftmatterBio@MAC Retreat, Workshop of the Soft-Condensed Matter & Biophysics group at McMaster University, November 27-28, 2009, The Westwind Inn, Buckhorn, ON, Canada
- Organizing Committee Member, NSE2005, International Workshop, September 7-10, 2005, ILL, Grenoble, France

Journal Referee

Physical Review Letters (18), Physical Review B (2), Physical Review E (11), Biophysical Journal (7), Biophysical Chemistry (1), Langmuir (5), Soft-Matter (6), European Physical Journal E (3), Journal of the American Chemical Society (4), Journal of Structural Biology (1), Journal of Molecular Liquids (1), Journal of Lipid Research (1), BBA – Biomembranes (17), European Biophysics Journal (1), Philosophical Magazine (1), Measurement Science and Technology (1), Journal of Physics (1), Langmuir (1), ACS Nano (2), The Journal of Physical Chemistry (4), Zeitschrift für Physikalische Chemie (1), Frontiers in Plant Science (1), FEBS Letters (1), RSC Advances(1), Journal of Applied Crystallography (1), PLOS ONE (4), ACS Applied Materials & Interfaces (1), Nature Communications (2), Biomacromolecules (2), Journal of Physical Chemistry Letters (2), Molecular Pharmaceutics (1), The FASEB Journal (2), Scientific Reports (4), ACS Omega (1), Chemistry and Physics of Lipids (2), Journal of Chemistry (1), Colloids and Surfaces B: Biointerfaces (1)

External Grant Review

NSERC (23), U.S. Department of Energy DOE (1), University of Missouri Research Board (2), Czech Science Foundation (1), Science and Technology Center in Ukraine (1), German Science Foundation DFG (3), Israel Science Foundation (1).

Tenure Reviews

McGill (1), University of South Florida (1), Wayne State University (2)

External Beam Time Allocation Reviews

National Institute of Standards and Technology NIST/NCNR (79), Oak Ridge National Laboratory (78), ANSTO Bragg Institute (9), the Austrian Science Fund FWF (1).

Areas of Interest

Membrane dynamics, dynamics of membrane embedded proteins, interactions between membrane inclusions, protein aggregation, neutron scattering, x-ray scattering, preparation of artificial membranes, development of sample environment (humidity chambers) for neutron and x-ray experiments, development of scattering techniques for the application in biology, undergraduate physics education, undergraduate and graduate student training.

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Honours

1. Early promotion to Full Professor, 2018, Department of Physics and Astronomy, McMaster University
2. Awarded title of University Scholar, McMaster University 2016-2020, \$60,000
3. *Soft Matter* Emerging Investigator 2013, Royal Society of Chemistry
4. Early tenure and promotion to Associate Professor, 2013, Department of Physics and Astronomy, McMaster University
5. Early Researcher Award 2012 (ERA), Ontario Ministry of Economic Development and Innovation (MEDI), , “Lost memories – Can we turn back time in Alzheimer’s disease?”, \$150,000
6. Young Scientist Award, European Neutron Scattering Association (ENSA) 2003