

Klaida Kashuri

Curriculum Vitae

Education

Ph.D Biophysics:

Worcester Polytechnic Institute, Worcester, (2007- 2014)

Calorimetry (High-resolution AC and MDSC), Low-Frequency Dielectric Spectra, and Optical Studies of self-assembled sterols/biomaterials.

M. Sc Physics: Worcester Polytechnic Institute, Worcester, MA (2004-2007)

Course work: Classical Mechanics, Quantum Mechanics, Thermodynamics & Statistics, Advanced Electromagnetism Theory.

B. Sc Physics (Title Physicist): Tirana University, Tirana, Albania (1996-2001)

- *Thermoluminescent dosimetry and applications on radioactivity measurements.*

Teaching and Research Experience

College of the Holy Cross; Worcester, MA

- Visiting Assistant Professor of Physics *August 2022- present*
- Lab Supervisor *August 2021- present*

Nano-Bio Systems, Massachusetts Biomedical Initiatives (BMI), Worcester, MA

- Data scientist *May 2021 – Dec 2021*

Becker College; Worcester, MA

- Associate Professor of Physics and Mathematics *August 2018-May 2021*
Lead of Physics Division

Assumption College, Worcester, MA

- Physics Lecturer *September 2014- May 2019*

Worcester Polytechnic Institute, Worcester, MA

- Assistant Teaching Professor of Physics *August 2013 – December 2017*
- Co-Instructor for outreach STEM programs (Frontiers, POEM, and Touch Tomorrow)
- Graduate Teaching and Research Assistant *August 2004 – May 2013*

Research Interest

Experimental research on Biophysics (order-disorder phenomena in condensed matter, with a focus in biomaterials), Physical Chemistry and Physics Education.

Some of the applied techniques: AC/MDSC Calorimetry; Polarizing Optical Microscopy (RGB measurement), Dielectric Spectroscopy (AC capacitance bridge); Electrochemical Impedance Spectroscopy (PS Trace) and Absorption Spectroscopy (Tecan Microplate Reader).

Courses Taught

College of the Holy Cross; Worcester, MA

Lecturer: Introductory Physics I (Calculus based) and co-instructor for Modern Lab

Becker College; Worcester, MA

- Physics I, II (algebra-based) with Labs on both Modalities in person and online. In total 175 students and I was working in switching to the Studio Physics model.
- Physics of the Universe (non-calculus based), taught on the project-based model.
- Worked on creating a new Biophysics course called “Physics of the Living Systems” for Health Science students
- College Algebra, Statistics and Contemporary Topics of Math (designed for business students)

Assumption College, Worcester, MA

- Lecturer : General Physics II, and Statics (engineering course)
- Lab Instructor: (Physics I and II).

Worcester Polytechnic Institute, Worcester, MA

Instructor/Logistician for Undergraduate Physics courses (calculus-based): Modern Physics (PH1130), Classical Mechanics (PH1110/1111), Electricity and Magnetism (PH1120/1121), Oscillations and Waves (PH1140).

Worcester Polytechnic Institute, Worcester, MA

Taught all undergraduate Physics labs and Conferences.

Conferences / Presentations / Abstract Published

2013 APS March Meeting (Boston, MA); “Heat Capacity Measurements by Simultaneous Relaxation and AC-Calorimetry.” *H. Kashuri, K. Kashuri, and G.S. Iannacchione.*

2012 APS March Meeting (Boston, MA); “Calorimetric and Low-Frequency Dielectric Studies of Mesoscopic Ordering in Solutions of Engineered DNA Hairpin Fragments.” *K. Kashuri, H. Kashuri, and G.S. Iannacchione.*

2011 APS March Meeting (Dallas, TX): “The Effect of Phosphate Buffered, Saline (1xPBS) on Induced Thermal Unfolding and Low-Frequency Dielectric Spectra of Lysozyme” *K. Kashuri, H. Kashuri, and G.S. Iannacchione, Bull. Am. Phys. Soc. 56 (2), P39.00004.*

2011 APS March Meeting (Dallas, TX); “Measuring the imaginary part of the permittivity using calorimetry”, *H. Kashuri, K. Sigdel, K. Kashuri, and G.S. Iannacchione, Bull. Am. Phys. Soc. 56 (2), W21.00014.*

2009 APS March Meeting (Pittsburgh, Pennsylvania); “ Pseudo-phase Diagram of Cholesterol-rich Filamentous, Helical Ribbons and Crystal Microstructures”, *Y.A.Miroshnikova, M. Elsenbeck, Guanqing Ou, Y.V. Zastavker, K. Kashuri, and G.S. Iannacchione; Bull. Am. Phys. Soc. 54 (1), H39.00010.*

2008 APS March Meeting (New Orleans, LA); “Calorimetric and Optical Studies of Cholesterol-Rich Filamentous, Helical Ribbons, and Crystal microstructures”, *Klaida Kashuri, G. S. Iannacchione, Y. A. Miroshnikova, and Y. V. Zastavker, Bull. Am. Phys. Soc. 53 (2), B17.00014 (2008). Bull. Am. Phys. Soc. 53 (2), B17.00014*

2007 WPI, GRAD Poster Presentation (Worcester, MA); “Calorimetric Study of Mesoscopic Ordering in Solutions of Engineered DNA Fragments”.

2006 WPI, Physics Department Graduate Seminar (Worcester, MA), “Review of Calorimetric Studies on Protein Unfolding.”

2005 WPI, Physics Department Graduate Seminar (Worcester, MA), “AC-Calorimetry Technique on Liquid Crystals Phase Transition.

Publications

1. *K. Kashuri, H. Kashuri, and G.S. Iannacchione; “LC-Phase Ordering of Short DNA Fragments in Aqueous Solution.” to be submitted.*
2. *K. Kashuri, H. Kashuri, and G.S. Iannacchione; “Understanding Lysozyme Conformation in Aqueous Solutions by thermal studies of Low-Frequency Dielectric Spectra and Calorimetry.” to be submitted.*
3. *Y. A. Miroshnikova, M. Elsenbeck, G. Ou, and Yevgeniya V. Zastavker, K. Kashuri and G. S. Iannacchione, “Phase Diagram of Microstructures in Chemically-Defined Lipid Concentrates by Optical Microscopy and High-resolution Calorimetry" submitted to Physical Review E*
4. *P.Kalakonda, K. Kashuri, H. Kashuri, and G.S. Iannacchione; “Calorimetry and Dielectric study of a negative dielectric anisotropy alkoxy-phenyl- benzoate liquid crystal” Indian Journal of Pure and Applied Physics 52(10),689-698(2014).*

Computer skills: Microsoft Office, Origin7, BASIC, MATLAB, Visual Python and Course Management (Blackboard, Brightspace, Canvas, Starfish)

Language: English, Albanian (native). Good knowledge of knowledge of Italian and Spanish.