Guy M. Parsey

parseygu@umich.edu

EECS - Rm 2233
University of Michigan
1301 Beal Avenue
Ann Arbor, MI 48109

Education

2013–2017	PhD in Physics/ECE, Colleges of Natural Science and Engineering, Michigan State University, USA.
2011–2013	MSc in Physics, College of Natural Science, MSU, USA.
2007–2011	BSc in Physics, College of Creative Studies, UC Santa Barbara, USA.

Professional Experience

2017 –	**Postdoctoral Research Assistant at UMich** Researcher for Dr. Mark Kushner in the Computational Plasma Science and Engineering Group. Present projects include optimization of solvers for CPSEG codes, development of new chemistry mechanisms for etching processes, and modeling of repetitively pulsed atmospheric pressure plasma jets onto liquid surfaces.
2011–2017	**Graduate Research Assistant at MSU** RA for Dr. John Verboncoeur in the Plasma Theory Simulation Group. Thesis work consisting of an open-source python framework for developing an understanding of plasma chemistry reaction kinetics and performing uncertainty analysis of source data. Framework is applied to multiple phenomena, ranging from single-species low-pressure discharges to plasma-assisted combustion of hydrocarbons and optically-pumped rare gas lasers. Unofficial system administrator for the research group.
Sum. 2010	**SULI at Lawrence Berkeley National Lab** DOE program, Science Undergraduate Laboratory Internships, under Dr. Steve Lund in the Accelerator and Fusion Research Division. Second summer: PIC simulations of beams with intense space-charge in Einzel lens transport.
Sum. 2009	**SULI at Lawrence Berkeley National Lab** First summer: Linear field model of stacked washer Einzel lens systems.
Sum. 2008	**Internship with Northrop Grumman Space Technologies** Implemented a video-based "real-time" tracking algorithm in MATLAB.
2006-2007	**Rock climbing instructor and youth team coach**

Languages and Software

Human	English (native), French (fluent)
Computer	Python, C/C++, Fortran, CUDA, MATLAB, and Mathematica LaTeX and MS Office Linux, OSX, and Windows

Publications and Presentations

pending pubs.	- *KGMf: Kinetic Global Modeling framework for Plasma and Gas-Phase Systems - CPC CPiP* - *Uncertainty analysis and V&V with global model simulations* - *Reaction network modeling of rare-gas lasers for EEDF optimization* - *Global modeling of plasma-assisted combustion reaction networks*
2016	58th DPP: *Kinetic Global Modeling of Rare Gas Laser Reaction Networks* - poster GRC PPS: *Kinetic Global Modeling framework* - poster
2015	68th GEC: *A Kinetic Plasma-Pumped Rare Gas Laser* - poster 42nd ICOPS: *Global Model Capability Study of EEDF Modification of Rare Gas Metastable Laser Reaction Kinetics* - poster
2014	67th GEC: *Feasibility Study of an EEDF Driven Rare Gas Metastable Laser* - poster 41st ICOPS: *General-Purpose Kinetic Global Modeling Framework for Multi-Phase Chemistry* - poster
2013	66th GEC: *Non-equilibrium Reaction Kinetics of an Atmospheric Pressure Microwave-Driven Plasma Torch: A Kinetic Global Model* - poster PPPS-2013: *Non-equilibrium Kinetics of a Microwave-Assisted Jet Flame: Global Model and Comparison with Experiment* - poster
2012	65th GEC: *Kinetic Modeling of Electronically Enhanced Reaction Pathways in Plasma Assisted Combustion* - poster

Awards

2015	Michigan Institute of Plasma Science and Engineering "Best Presentation Award" - Graduate Symposium
2007	Regional winners of ExploraVision Science competition

Personal Information

- D.O.B: October 3rd, 1989
- Dual citizenship: USA and UK
- Interests: rock climbing, cycling, hiking, DIY electronics, and cooking

* References available upon request