Michael J. Hankins, Ph.D.

Employment

Southern Illinois University-Edwardsville Edwardsville, Il 1/1/2017-6/30/2021

Instructor/Visiting Assistant Professor/Assistant Professor (Dept. of Chemistry)

- Instructor for Introductory Chemistry Course
- Lab Coordinator for Engineering Chemistry labs
- Electrochemistry research
- Physical Chemistry lecture and lab coordinator

Saint Louis University St. Louis, MO 7/1/2010

Education	Saint Louis University	St. Louis, MO	8/22/2005-7/5/2017
	PhD. in Integrated and Applied S		

quorum sensing in the single-cathode multi-anode nickel electrodissolution system. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, *29*(3), 033114.

Conferences

- 2010 Midwest Regional ACS Conference poster presentation
- 2011 Midwest Regional ACS Conference poster presentation
- 2012 Gordon Research Conference (Dynamic Instabilities) poster
- 2015 ECS conference poster presentation
- 2016 ACS Spring National Conference poster presentation
- 2017-2020 ILSAMP Spring Symposia judge

Teaching Experience

- Teaching Assistant General Chemistry Lab (2010-2011)
- Recording lectures for General Chemistry lecture course (2015)
- Large lecture experience (introductory chemistry approx. 160 students)
- Upper level lecture experience (physical chemistry)
- Lab coordinator experience (physical chemistry, engineering chemistry, and general chemistry)

Memberships/Affiliations

- American Chemical Society (ACS)
  Co-Chair Elect Committee for Minority Affairs
- The Electrochemical Society (ECS)
- National Society of Black Engineers (NSBE)

Service/Volunteer Work

Department of Graduate Education at Saint Louis University
Graduate Student Orientation (registration and panel discussion)
Program G.R.A.D. (Team leader)
African American Male Scholars (AAMS) Initiative Mentor
African American Studies Department at Saint Louis University
Help with hosting inner city schools on campus
Visiting youth at inner city schools
Black Faculty and Staff Association VP of faculty
Chemistry Club advisor

Project summary

Methodology for a nullcline-based model from direct experiments: Applications to electrochemical reaction models

- Simulations using existing iron dissolution model displaying non-linear behavior
- Solving ODEs with various parameters and variables
- Using adaptive and PID controllers to isolated the stable and unstable manifolds of the system
- **Conclusion** Trajectory of oscillations follows the nullcline of the fast variable

Production of graphene-coated nickel electrodes for improvement charge transfer behavior

- Create graphene-coated nickel electrodes
    - Chemical vapor deposition
    - Change temperature and gas