

REYHAN TASPINAR

Science Center 3701 Market St
Philadelphia PA 19104
Cell Phone: 267-994-8900
rt373@drexel.edu

EDUCATION

Ph.D. Mechanical Engineering and Mechanics, September 2009 - present
Drexel University, Philadelphia, PA
Advisor: Dr. E. Caglan Kumbur

B.S. Major in Mechanical Engineering, September 2004 - June 2009
Middle East Technical University, Ankara, Turkey

RESEARCH INTERESTS

Polymer Electrolyte Membrane Fuel Cells, Component Interfaces, Mathematical Modeling, Electrochemistry, Two Phase Transport in Porous Media

PUBLICATIONS

Journal Articles

- 1) Kalidindi, A. R., **Taspinar, R.***, Litster, S., and Kumbur, E. C., 2013, "A two-phase model for studying role of microporous layer and catalyst layer interface on polymer electrolyte fuel cell performance," *International Journal of Hydrogen Energy*, vol. 38, pp. 9297-9309. (*50% contribution)

Peer-Reviewed Conference Proceedings

- 1) Zenyuk, I., **Taspinar, R.**, Kalidindi, A. R., Kumbur, E. C., and Litster, S., 2013 "Coupling of deterministic contact mechanics model and two-phase model to study the effect of catalyst layer | microporous layer interface on polymer electrolyte fuel cell," *Electrochemical Society Transactions*, vol. 58(1), pp. 1125-1135.

Conference Presentations and Posters

- 1) Zenyuk, I., **Taspinar, R.**, Kalidindi, A. R., Kumbur, E. C., and Litster, S., 2013, "Coupling of Deterministic Contact Mechanics Model and Two-Phase Model to Study the Effect of Catalyst Layer | Microporous Layer Interface on Polymer Electrolyte Fuel Cell Performance," *224th Electrochemical Society Meeting*, San Francisco, CA, Oct 27-Nov 1. (Poster Presentation– Best Poster Award)
- 2) **Taspinar, R.**, Kalidindi, A. R., Litster, S., and Kumbur, E. C., 2013, "Role of microporous layer and catalyst layer interface on two phase transport in polymer electrolyte fuel cells," *ASME 7th International Conference on Energy Sustainability*, Minneapolis, MN, July 14-19. (Oral Presentation)
- 3) Kalidindi, A.R., **Taspinar, R.**, Kumbur, E.C., 2013, "Studying Interfacial Regions in Polymer Electrolyte Fuel Cells" *Drexel Research Day*, Philadelphia, PA, April 18. (Poster Presentation).
- 4) Kalidindi, A.R., **Taspinar, R.**, Kumbur, E.C., 2012, "Performance Modeling of Polymer Electrolyte Fuel Cells" *Drexel Research Experience for Undergraduates Poster Session*, Philadelphia, Pennsylvania, August 16. (Poster Presentation)

- 5) Kalidindi, A.R., **Taspinar, R.**, Kumbur, E.C., 2012, *“Effects of Interfacial Morphology on Polymer Electrolyte Fuel Cell Performance,”* Society of Engineering Science 49th Annual Technical Meeting, Atlanta, GA, October 10-12. (Oral Presentation – Best Presentation Award)

EXPERIENCE

Teaching Assistant, Mechanical Engineering and Mechanics Department, Sept 2009-Present
Drexel University, Philadelphia PA

- MEM 310 - Thermodynamic Analysis 1 (Fall 2009, Spring 2010, Spring 2011, Spring 2012)
Held recitation sections, solved problems, evaluated class projects and graded homework assignments.
- ENGR 201 – Evaluation and Presentation of Experimental Data 1 (Spring 2010)
Held lab sections and graded lab reports.
- ENGR 210- Introduction to Thermodynamics (Winter-Summer 2010, Winter 2012-2013-2014)
Held recitation sections, solved problems and evaluated student performances.
- MEM 220-Basic Fluid Mechanics (Summer 2010, Winter 2014)
Graded fluid mechanics quizzes.
- MEM 311-Thermal Fluid Science Laboratory (Fall 2012, Fall-Spring 2013)
Held lab sections, guided students for experimental procedures, evaluated lab reports.

INTERNSHIP

Computer Aided Engineering Division, June 2008 – July 2008

Ford Otosan Motor Company, Kocaeli, Turkey

- Designed Graphical User Interface (GUI) in MATLAB for Post Process of Bore Distortion

Mechanical Design and Manufacturing Division, August 2007 – September 2007

Balikesir Electromechanical Industrial Plants Corporation, Balikesir, Turkey

- Observed and learned several manufacturing techniques

HONORS AND AWARDS

- Dean’s Fellowship, College of Engineering, Drexel University – (September 2009 – September 2010)
- Haci Omer Sabancı Foundation Fellowship – (September 2004 – June 2009)
- Turkish Government Fellowship – (September 2004 – June 2009)

AFFILIATIONS

President, Treasurer and Board Member of Drexel Turkish Student Association

Member of American Society of Mechanical Engineers