CANDIDATE FOR ISE PRESIDENT ELECT

Mark E. Orazem

Mark Orazem is active in both the International Society of Electrochemistry (ISE) and the Electrochemical Society (ECS). Orazem has served for the ISE on selection committees for various prizes, he was the 2004-2006 US Regional Representative to the ISE, and he serves as a 2006-2008 Vice President of the ISE. He organized the 6th International Symposium on Electrochemical Impedance Spectroscopy, which was held under ISE co-sponsorship in Cocoa Beach, Florida in May 2004, and was the guest editor for the corresponding special issue of *Electrochimica Acta*. For the ECS, Orazem is an associate editor of the *Journal of the Electrochemical Society* and is the instructor for the ECS short course on Impedance Spectroscopy. Orazem is a Fellow of the ECS.

Orazem has enjoyed active collaboration with researchers in France, Italy, Belgium, and Brazil. He has spent two separate sabbatical years with the CNRS in Paris, and is co-authoring, with Bernard Tribollet of the CNRS in Paris, a textbook on impedance spectroscopy. In his service on ECS committees and on the editorial board of the ECS and NACE journals, Orazem has sought to increase involvement of scientists from outside the United States. In his service on the executive committee of the ISE, he acted to improve cooperation between the ISE and ECS.

Personal Statement

My goal is to make the ISE increasingly relevant and useful to the electrochemical community by encouraging increased activity by the divisions of the society, by enhancing collaborative activities with other societies to advance electrochemical education and research, and by improving avenues for members to provide input to the ISE. Great strides have been made in these directions over the past 10 years, and, as Vice President, I have been privileged to have had the opportunity to contribute to these efforts. If elected, I intend to continue to help the society meet its goals of promoting excellence in scholarship, of facilitating electrochemical research and education, and of disseminating the results of electrochemical research through high-quality conferences and publications.

CURRICULUM VITAE for Mark E. Orazem

Position: Professor
Department of Chemical Engineering, University of Florida

Research Interests

Electrochemical Engineering: electrochemical impedance spectroscopy, corrosion (including cathodic protection), current distribution in electrochemical systems, fuel cells, mathematical modeling.

Education

BS Chemical Engineering, Kansas State University, Manhattan, Kansas, 1976.
MS Chemical Engineering, Kansas State University, Manhattan, Kansas, 1978.
PhD Chemical Engineering, University of California, Berkeley, California, 1983.

Experience

- Department of Chemical Engineering, University of Virginia, Charlottesville, Virginia.
  - Assistant Professor, September 1983 - August 1988.
- Department of Chemical Engineering, University of Florida, Gainesville, Florida.
  - Associate Professor, August 1988 - August 1992.
  - Professor, August 1992 - present.
  - University of Florida Research Foundation Professor, 1999-2002.
  - Charles A. Stokes Professor of Chemical Engineering, 2000-2003.

- UPR 15 du CNRS, "Laboratoire Interfaces et Systèmes Electrochimiques," Université Pierre et Marie Curie, Paris, France
  - July 1993 (visiting professor).
  - July 1994 - April 1995 (sabbatical).
  - July 2001 - July 2002 (sabbatical).
- Institut National Polytechnique de Toulouse, Toulouse, France, July 2006 (visiting professor)

Publications

1 textbook (in production)
2 edited works (conference proceedings volumes)
86 refereed journal publications and chapters in books
34 refereed conference proceedings
19 non-refereed conference proceedings
156 presentations at technical meetings

Theses and Dissertations Directed

3 ME degrees
18 MS degrees
17 PhD degrees
4 current graduate students

Professional Honors

- Recent Awards
  - University of Florida Research Foundation Professorship, 1999-2002.
  - Charles A. Stokes Professor of Chemical Engineering, 2000-2003.
  - Recognized as a Distinguished Educator by BP Azerbaijan, 2005.
  - Recognized as the Distinguished UF International Educator, College of Engineering, 2005.
  - Excellence in Teaching Award, student chapter of the AIChE, 2006.
  - Fellow of *the Electrochemical Society*, Elected 2006.
- Recent Invitations as Plenary Speaker
  - EMCR 2006, Dourdan, France, June 18-23, 2006.
  - 7th International Symposium on Electrochemical Impedance Spectroscopy, Argelés sur Mer, France, June 3-8, 2007.
  - INTERCORR 2008, 28th Congresso Brasileiro de Corrosão, Recife, Brazil, May 12-16, 2008.
- Current Major Professional Society Positions
  - Associate Editor of the *Journal of the Electrochemical Society*, 2001-present.
  - Vice President of the *International Society of Electrochemistry*, 2006-2008.
- Current Major University of Florida Positions
  - Member of University of Florida Faculty Senate, 2005-2011.
  - Member of University of Florida College of Engineering Faculty Council, 2006-2011.
  - Member of College of Engineering Budget Cut Advisory Committee, 2008.
  - Faculty coordinator for the Fuel Cell component of the NASA-supported program on "Hydrogen Research for Aviation and Space-Based Applications," 2004-2008.
  - Member of University of Florida Council on Research and Scholarship, 2006-2007, 2008.
  - Member of University of Florida Academic Infrastructure Council, 2009-2011.

Textbook

1. M. E. Orazem and B. Tribollet, *Electrochemical Impedance Spectroscopy,* John Wiley & Sons, in production with a target release date of July 2008.

Recent Journal Publications

1. V. Huang, V. Vivier, M. Orazem, N. Pébère, and B. Tribollet, "The Apparent CPE Behavior of an Ideally Polarized Blocking Electrode: A Global and Local Impedance Analysis," *Journal of the Electrochemical Society,* **154** (2007), C81-C88.
2. V. Huang, V. Vivier, M. Orazem, I. Frateur, and B. Tribollet, "The Global and Local Impedance Response of a Blocking Disk Electrode with Local CPE Behavior," *Journal of the Electrochemical Society,* **154** (2007), C89-C98.
3. V. Huang, V. Vivier, M. Orazem, N. Pébère, and B. Tribollet, "The Apparent CPE Behavior of a Disk Electrode with Faradaic Reactions: A Global and Local Impedance Analysis," *Journal of the Electrochemical Society,* **154** (2007), C99-C107.
4. K. Allahar, M. E. Orazem, and K. Ogle, "Mathematical Model for Cathodic Delamination using a Porosity-PH Relationship," *Corrosion Science,* **49** (2007), 3638-3658.
5. S. K. Roy and M. E. Orazem, "Error Analysis of the Impedance Response of PEM Fuel Cells," *Journal of the Electrochemical Society,* **154** (2007), B883-B891.
6. I. Frateur, V. Huang, M. Orazem, V. Vivier, and B. Tribollet, "Experimental Issues Associated with Measurement of Local Electrochemical Impedance," *Journal of the Electrochemical Society,* **154** (2007), C719-C727.
7. S. K. Roy, M. E. Orazem, and B. Tribollet, "Interpretation of Low-Frequency Inductive Loops in PEM Fuel Cells," *Journal of the Electrochemical Society,* **154** (2007), B1378-B1388.
8. V. Huang, C. Allely, K. Ogle and M. E. Orazem, "A Mathematical Model for Cathodic Delamination of Coated Metal Including a Kinetic pH-Porosity Relationship," *Journal of the Electrochemical Society,* **155** (2008), C279-C292.
9. M. E. Orazem and B. Tribollet, "An Integrated Approach to Electrochemical Impedance Spectroscopy," *Electrochimica Acta,* in press, 2008.
10. I. Frateur, V. Huang, M. E. Orazem, N. Pébère, B. Tribollet, and V. Vivier, "Local Electrochemical Impedance Spectroscopy: Considerations about the Cell Geometry," *Electrochimica Acta,* in press, 2008.