

## **CURRICULUM VITAE**

### Edgar Lara-Curzio

Oak Ridge National Laboratory  
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### **Education:**

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|------------------------------|--|
| Ph. D. Materials Engineering | Rensselaer Polytechnic Institute, Troy, NY<br>August 1992              |
| B. Sc. Engineering Physics   | Autonomous Metropolitan University, Mexico City,<br>Mexico, July 1986. |

### **Experience:**

**Director, High Temperature Materials Laboratory**  
Oak Ridge National Laboratory. February 1<sup>st</sup>, 2007-Present  
Responsible for the management, operation, technical leadership and long-term planning of the High Temperature Materials Laboratory (HTML) and the HTML User Program.

**Group Leader**  
Mechanical Properties & Mechanics Group, Oak Ridge National Laboratory, December 1999-2011.  
Responsible for the management, operation, technical leadership and long-term planning of the Mechanical Properties & Mechanics Group in the Materials Science & Technology Division, and the Mechanical Characterization and Analysis User Center as part of the High Temperature Materials Laboratory User Program.

**Distinguished Research Staff Member**  
Oak Ridge National Laboratory, Materials Science & Technology Division.  
May 2003-Present.  
Principal investigator for research projects sponsored by the U.S. Department of Energy and industry, and collaborative projects with industry and academia.  
Areas of Expertise: Mechanical Behavior of Materials; Experimental Mechanics and Non-Destructive Evaluation of Materials and Components; Development of Standard Test Methods for Mechanical Testing; Modeling of Material Behavior; Environmental Effects on Physical and Mechanical Properties; Development of Life-Prediction Models; Characterization and Evaluation of Composite Materials,

Thermal Barrier Coatings, Magnetic Materials, Thermoelectrics, Porous Materials, Materials for Power Generation, and for the Conversion, Transmission and Storage of Energy; Materials for Solid Oxide Fuel Cells and Microturbines.

**Senior Research Staff Member**

Oak Ridge National Laboratory, Metals & Ceramics Division.  
July 2000-May 2003.

**Development Staff Member**

Oak Ridge National Laboratory, Metals & Ceramics Division  
September 1993-July 2000.

**Post-doctoral researcher**

Oak Ridge National Laboratory, Metals & Ceramics Division, High Temperature Materials Laboratory  
September 1992-August 1993.

**Graduate Research Assistant**

Rensselaer Polytechnic Institute, Center for Composite Materials and Structures,  
January 1987-August 1992.

**Teaching Assistant:**

Rensselaer Polytechnic Institute, Troy NY. Department of Materials Engineering. Courses: *Physical Metallurgy*, Spring 1989. *Deformation of Materials and Rheology*, Fall 1990. *Composites Fabrication Laboratory*, Spring 1991, Spring 1992. Autonomous Metropolitan University, Mexico City, Mexico. Department of Energy. Courses: *Applied Thermodynamics I*, Spring 1985, and Summer 1985. *Applied Thermodynamics II*, Fall 1985. *Fluid Mechanics*, Spring 1986.

**Undergraduate Research Assistant:**

Autonomous Metropolitan University, Mexico City, Mexico. Department of Energy, 1984-1986.

**Technician:**

Optica Experta, Tlalnepantla, Mexico. August 1982-October 1983.

**Other:**

Instructor for *National Program Against Illiteracy*, Tlalnepantla, México.  
September 1979- January 1982

Design Engineer for *Reconstruction of México City*. Carried out calculations for hydraulic, electrical and gas installations for new housing projects in downtown Mexico City, México, after the 1985 earthquakes. September 1985-July 1986.

## Professional Organizations:

- American Ceramic Society (ACerS)
- American Society for Testing and Materials (ASTM-International)
- ASM International
- Materials Research Society
- SAE
- TMS

## Honors and Awards:

- **2009 Best Paper Award**, “Microstructural and Mechanical Characterization of a Hybrid Oxide CMC Combustor Liner After 25,000-hour Engine Test,” IGTI/ASME Ceramics Committee.
- **R&D100 Award**, “Methodology for Estimating the Life of Power Line Conductor-Connector Systems Operating at High Temperatures,” Jy-An John Wang, Edgar Lara-Curzio, Thomas King Jr., John Chan, Joe Graziano and Tip Goodwin III
- **2009 Arthur Frederick Greaves-Walker Award** from the American Ceramic Society and the National Institute of Ceramic Engineers, in recognition of his “...outstanding service to the ceramic engineering profession” and for exemplifying, “through life and career, the ideals and purpose of the National Institute of Ceramic Engineers.” October 26, 2009
- **Fellow**, American Ceramic Society, October 2008
- **Presidential Commendation**, “For Outstanding Contributions as the 2006-07 Engineering Ceramics Division Chair, including his visionary leadership in advancing the International Conference on Advanced Ceramics and Composites to a new level of success,” The American Ceramic Society, Daytona Beach, Florida January 21-26, 2007
- **ORNL Mentoring Award**, “In recognition of your dedication to the education of future scientists and engineers and your support of educational programs at Oak Ridge National Laboratory,” September 2006
- **Award of Appreciation**, American Society for Testing and Materials (ASTM), Committee C28 on Advanced Ceramics for authoring standard C1557-03 “Test Method for Tensile Strength and Young’s Modulus of Fibers,” May 2004.
- **Best R&D Leader**, 2003, UT-Battelle Awards Night, Oak Ridge National Laboratory, November 21, 2003
- **2003 Richard M. Fulrath Award**, American Ceramic Society, April 2003.

- **Invited Participant**, *2nd Japan-US Frontiers of Engineering Symposium*, US-National Academy of Engineering, Academy of Engineering of Japan, Tokyo, Japan October 24-26, 2002
- **Advanced Ceramics Award**, American Society for Testing and Materials, West Conshohocken, PA, April 2002
- **Award of Merit**, American Society for Testing and Materials, West Conshohocken, PA January 18, 2001
- **Fellow**, American Society for Testing and Materials, West Conshohocken, PA January 18, 2001
- **Invited Participant** to the sixth “Frontiers of Engineering” Symposium, National Academy of Engineering, Irvine, CA September 13-16, 2000
- **Recognition**, Federal Laboratory Consortium for Technology Transfer, for Efforts Related to the Development of Iron Aluminide Hot Gas Filters, Oak Ridge, TN July 2000.
- **Award of Appreciation**, American Society for Testing and Materials (ASTM), Committee C28 on Advanced Ceramics for authoring standard C1425 *Standard Test Method for Interlaminar Shear Strength of 1-D and 2-D Continuous Fiber-Reinforced Advanced Ceramics at Elevated Temperature*, November 1999.
- **Award of Appreciation**, American Society for Testing and Materials (ASTM), Committee C28 on Advanced Ceramics for authoring standard C 1337, *Test Method for Creep and Creep Rupture of Continuous Fiber-Reinforced Composites under Tensile Loading at Elevated Temperatures*, January 1997.
- **Award of Appreciation**, American Society for Testing and Materials (ASTM), Committee C28 on Advanced Ceramics for authoring standard C 1292, *Test Method for Shear Strength of Continuous Fiber-Reinforced Ceramics at Room Temperature*, January 1996.
- **Hispanic Engineer of the Year for Outstanding Technical Achievements**, Hispanic Engineer National Achievement Awards Conference, Houston, TX, October 11, 1997
- **Judge**, 1998-2000 R&D 100 Awards
- **Best of Show and First Place Poster Award**, American Ceramic Society. In recognition of the Poster Presentation entitled “Characterization of Nicalon™/SiC Composites with BN/Al<sub>2</sub>O<sub>3</sub> Fiber Coatings,” presented at the 99th Annual Meeting & Exposition, Cincinnati, OH May 4-7, 1997
- **Best Poster Award**, Engineering Ceramics Division, American Ceramic Society. In recognition of the Poster Presentation entitled “Multilayer SiC Fiber Coatings in Nicalon™ Fiber-Reinforced Ceramic Matrix Composites,” presented at the 1996 Conference & Exposition on Composites, Advanced Ceramics, Materials and Structures, Cocoa Beach, FL January 7-11, 1996

- **Third Prize**, Engineering Ceramics Division, American Ceramic Society. In recognition of the Paper entitled “Evaluation of the Interfacial Mechanical Properties of Fiber-Reinforced Boron Nitride Matrix Composites,” presented at the 1994 Conference & Exposition on Composites, Advanced Ceramics, Materials and Structures, Cocoa Beach, FL January 9-14, 1994
- **First place**, Society for the Advancement of Materials and Process Engineering (SAMPE) *First Annual Graduate Student Symposium-Competition*, at the SAMPE 36th Annual Meeting, San Diego, CA. April 16, 1991.
- **First place**, First National Contest for Creative Scientific and Technological Projects, National Council for Science and Technology, (CONACYT) Mexico City, Mexico. July 1985. Project Title: “An Electrostatic Precipitator to Control Diesel Engine Emissions for the Mexico City Transport System”.
- **Member of Alpha Sigma Mu**. New York Gamma Chapter. International Metallurgical Honorary Society. Inducted in Troy NY, 1988.
- **Medalla al Mérito Universitario (Summa-Cum Laude)** Autonomous Metropolitan University, Mexico City, Mexico. July 1986

### **ORNL-Related Activities:**

- Reviewer, LDRD Pre-proposals. April-May, 2011
- Member, Selection Committees for UT-Battelle Awards Night in 2006-2011
  - For “Excellence in Safety Leadership”
  - For “Technical Support”
- Chair, 2009 ORNL United Way Campaign
- Co-chair, 2008 ORNL United Way Campaign
- Participant in ORNL’s “Developing Leadership Potential” program, 2007-2008.
- Member, “ORNL Retirement Focus Group,” Oak Ridge National Laboratory, Oak Ridge, TN. April 2003-2004
- Participant in Safety Communications Research Panel. March 2006.
- Member, Materials R&D Thrust Area Committee, Metals & Ceramics Division, Oak Ridge National Laboratory, Oak Ridge, TN. May 2001-2003
- Member, Re-engineering Committee, High Temperature Materials Laboratory, Oak Ridge National Laboratory, Oak Ridge, TN. 1996-2000
- Graduate of ORNL-Leadership-5, March 1999
- Attendee, “Project Management Survival Skills” workshop. October 1999.
- Attendee, “Leadership, Enhancement and Development Program (LEaD)” for front-line supervisors and group leaders.

- Member, Library Committee, Metals & Ceramics Division, Oak Ridge National Laboratory, 1999-2004.

### **Professional Activities:**

- **Member**, International Editorial Committee, Boletín de la Sociedad Española de Cerámica y Vidrio, June 2011-date
- **Panel member**, “Managing a Research Team,” Society of Hispanic Professional Engineers Graduate Institute, Cincinnati OH, October 29, 2010
- **Judge**, Student Technical Poster Competition, Society of Hispanic Professional Engineers Graduate Institute, Cincinnati OH, October 29, 2010
- **Member**, Volunteer Structure Project, American Ceramic Society, October 2010-date
- **Member**, Meetings Committee, American Ceramic Society, October 2009-October 2012
- **Member**, Executive Committee, ASM Oak Ridge Chapter. 2010-2011
- **Counselor**, Engineering Ceramics Division, ACerS, September 2007-October 2009
- **Chair**, Engineering Ceramics Division, ACerS, October 2006-September 2007
- **Chair-elect**, Engineering Ceramics Division, ACerS, April 2005-October 2006.
- **Treasurer & vice-Chair**, Engineering Ceramics Division, American Ceramic Society, April 2004- April 2005.
- **Chairman**, Subcommittee C28.07 on Ceramic Composites of the American Society for Testing and Materials (ASTM). November 1999-2007.
- **Associate Editor**, Journal of the American Ceramic Society. February 2001-date.
- **Secretary**, Engineering Ceramics Division, American Ceramic Society, April 2003-April 2004
- **Invited Participant** to NASA’s Technical Interchange Meeting on NDE, after the Space Shuttle Columbia Accident, Kennedy Space Center, May 8-9, 2003
- **Chairman**, Awards Committee, Engineering Ceramics Division, American Ceramic Society, April 2001-April 2002
- **Member**, Industrial Advisory Council, Department of Materials Science and Engineering, University of Alabama-Birmingham, April 2002-date
- **Vice-Chairman and Secretary**, Subcommittee C28.07 on Ceramic Composites of the American Society for Testing and Materials (ASTM). January 1995-November 1999.
- **Co-Chairperson** of Coordination Group on Test Methods for Ceramic Matrix Composites, Military Handbook-17, November 1995-2002

- **Leader**, Task Group on “Rules Governing Testing,” American Society for Mechanical Engineers (ASME) Boiler and Pressure Vessel Code for Ceramic Matrix Composites, August 1996-2002
- **Leader and US Representative**, Working Groups 20 and 21 of Technical Committee 206 (TC-206) of the International Standards Organization (ISO). September 1998-2008.
- **Member**, Testing & Evaluation Committee, Joining Critical Technology Sector 2000 - 2001, ASM International.
- **Member**, International Materials Review Committee of ASM International, September 1999-2002.
- **Member**, Executive Committee, ASM-International, Oak Ridge Chapter, 1994-1997, 2006-date
- **Member**, International Program Committee of CREST-International Symposium on SiC/SiC Composite Materials R & D and its Application to Advanced Energy Systems. May 20-22, 2002, Kyoto, Japan.

### **Organizational Activities in National and International Conferences:**

- **Co-Chair**, Technical Program Committee, 4<sup>th</sup> International Congress on Ceramics, Chicago, IL July 15-19, 2012
- **Member**, Program Coordination Committee for Materials Science & Technology, 2012 Conference & Exhibition, Pittsburgh, PA, October 7-11, 2012
- **Session Chair**, *Characterization and Synthesis*, 30<sup>th</sup> International Conference on Thermoelectrics (ICT 2011), Traverse City, MI, July 21, 2011
- **Co-Organizer**, Educational Symposium: Innovations in Mechanical Testing, Oak Ridge Chapter of ASM International, Oak Ridge, TN April 19, 2011
- **Session Chair**, *Processing, Characterization and Properties of Honeycombs, Foams, and Highly Porous Materials*, 2010 Materials Science & Technology 2010 Meeting, Houston, TX October 18, 2010
- **Member**, Committee “Advanced Materials for Our Energy Future,” Materials Research Society, 2010
- **Discussion Leader**, 2010 Gordon Conference on Ceramics, Solid State Studies in Fundamental Phenomena in Energy Applications, August 15-20, 2010, Colby-Sawyer College, New London, NH
- **Session Chair**, "Materials Compatibility with Biofuels," *Materials Challenges in Alternative & Renewable Energy*, Cocoa Beach, Florida, February 21-25, 2010

- **Member of Advisory and Planning Committees**, *Materials Challenges in Alternative & Renewable Energy*, Cocoa Beach, Florida, February 21-25, 2010
- **Member of Advisory Committee**, *Materials Innovations in an Emerging Hydrogen Economy*, Cocoa Beach, Florida, February 24-27, 2008
- **Session Chair**, "Cell and Stack Design: Performance Analysis and Reliability II, " 32nd International Conference on Advanced Ceramics and Composites, Daytona Beach, Florida January 31, 2008
- **Co-Organizer**, *Symposium on Materials and Systems: Commonality of Phenomena in Composite Materials*, at 2007 MS&T Conference and Exhibition, Detroit, MI September 16-19, 2007
- **Session Chair**, "Particle Reinforced Composites," 2007 MS&T Conference and Exhibition, Detroit, MI September 18, 2007
- **Organizer**, *Symposium on Processing, Properties and Performance of Engineering Ceramics and Composites*, at the 31<sup>st</sup> International Conference on Advanced Ceramics and Composites, Daytona Beach, Florida January 22-26, 2007
- **Session Chair**, *Plenary Session, 31<sup>st</sup> International Conference on Advanced Ceramics and Composites*, Daytona Beach, Florida January 22, 2007
- **Session Chair**, *Poster Session, 31<sup>st</sup> International Conference on Advanced Ceramics and Composites*, Daytona Beach, Florida January 23-24, 2007
- **Organizer**, *Symposium on Ceramic Matrix Composites*, MS&T-06, Cincinnati OH, October 16-17, 2006
- **Program Chair**, *30<sup>th</sup> International Conference on Advanced Ceramics and Composites*, Cocoa Beach, Florida January 22-27, 2006
- **Organizer**, Oak Ridge Institute for Continued Learning Lecture (ORICL) Series on "Materials for Energy," Roane State Technical Community College, January-February, 2006
- **Session Chair**, *Symposium on Ceramic Matrix Composites*, MS&T-06, Cincinnati OH, October 16, 2005,
- **Organizer**, *Symposium on Mechanical Behavior and Design of Engineering Ceramics and Composites*, 29<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 24-28, 2005
- **Co-organizer**, *5<sup>th</sup> International Conference on High Temperature Ceramic Matrix Composites*, Seattle, WA September 12-16, 2004
- **Session Chair**, *Poster Session, " 5<sup>th</sup> International Conference on High Temperature Ceramic Matrix Composites*, Seattle, WA September 14, 2004
- **Session Chair**, *Oxide-Oxide Composites, " 5<sup>th</sup> International Conference on High Temperature Ceramic Matrix Composites*, Seattle, WA September 15, 2004

- **Session Chair**, *Processing, Characterization and Test Methods*, ” at the Ceramic Matrix Composites Symposium, 2004 Annual Meetings of the American Ceramic Society, Indianapolis, IN April 21, 2004.
- **Session Chair**, *Mechanical Properties of Cell and Stack Component Materials*, 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 29, 2004
- **Session Chair**, *Composites: Damage Analysis and Modeling*, 27<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 31, 2003
- **Organizer**, *Symposium on Mechanical Behavior and Design of Engineering Ceramics and Composites*, 27<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 26-31, 2003
- **Session Chair**, *Mechanical Properties of Composites at Room and Elevated Temperatures*, ” 104<sup>th</sup> Annual Meeting and Exposition of the American Ceramic Society, St. Louis Mo, May 1, 2002.
- **Organizer**, *Symposium on Mechanical Behavior, Design of Engineering Ceramics and Composites*, American Ceramic Society, 26<sup>th</sup> Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 13-18, 2002
- **Session Chair**, *Ceramics and Composites for Gas Turbine Engines*, American Ceramic Society, 26<sup>th</sup> Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 16, 2002
- **Organizer**, *Symposium on Mechanical Behavior, Design of Engineering Ceramics and Composites*, American Ceramic Society, 25<sup>th</sup> Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 21-26, 2001
- **Session Chair**, *Mechanical Properties*, American Ceramic Society, 25<sup>th</sup> Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 21-26, 2001
- **Session Chair**, Session “Carbon/Carbon and Ceramic Matrix Composites: 2,” at the *12th International Conference on Composite Materials ICCM12*, Paris, France July 4-9, 1999
- **Co-organizer and co-chairperson**, *Symposium on Mechanical, Thermal and Environmental Properties and Performance of CFCCs and Components*, American Society for Testing and Materials, Seattle, Washington, May 18, 1999
- **Session Chair**, Session I, *Symposium on Mechanical, Thermal and Environmental Properties and Performance of CFCCs and Components*, American Society for Testing and Materials, Seattle, Washington, May 18, 1999
- **Session Chair**, session *Environmental Effects*, 23<sup>rd</sup> Annual Cocoa Beach Conference and Exposition, Cocoa Beach, Florida January 29, 1999

- **Session Chair and Session Developer**, *Stress Rupture of Ceramic Matrix Composites*, Fifth International Conference on Composites Engineering, ICCE/5, Las Vegas, NV, July 4-10, 1998
- **Session Chair**, *Mechanical Test Methods & NDE*, 21st Annual Cocoa Beach Conference and Exposition, Cocoa Beach, FL. January 15, 1997.
- **Session Chair and Session Developer**, *Stress Rupture of Ceramic Matrix Composites*, Fourth International Conference on Composites Engineering, ICCE/4, Kohala Coast, Hawaii, July 6-12, 1997
- **Co-organizer**, *Symposium on Thermal and Mechanical Test Methods and Behavior of Continuous Fiber Ceramic Composites*, Cocoa Beach, Florida, January 7-11, 1996
- **Session Chair**, *Modeling of Mechanical Properties*, Ceramic and Metal Matrix Composites, San Sebastián, Spain, September 10, 1996
- **Member**, International Scientific Committee, *International Workshop on Modeling of the Mechanical Behavior of Continuous Fiber Reinforced Ceramic Matrix Composites*, MCMC'96, held in Petten, The Netherlands, September 16-18, 1996.
- **Session Chair**, *Life Prediction and Environmental Effects*, at *First International Workshop on Modeling of the Mechanical Behavior of Continuous Fiber Ceramic Composites*, Petten, The Netherlands, September 17, 1996.
- **Session Chair**, *High Temperature Test Methods*, Symposium on Thermal and Mechanical Test Methods and Behavior of Continuous Fiber Ceramic Composites, Cocoa Beach, Florida, January 8, 1996
- **Co-Chairperson Session M8**, *Experimental Verification of Interfacial Behavior*, 1994 Fall Meeting of the Materials Research Society, Boston Massachusetts, November 28, 1994.
- **Co-organizer and co-chairperson**, *Workshop on Thermal and Mechanical Test Methods and Behavior of CFCCs*, held in conjunction with the committee meetings of the American Society for Testing and Materials committee C28 on Advanced Ceramics, Montreal, Quebec, Canada June 22-24, 1994

### Invited Presentations:

- **Invited Presentation**, “Recent Advances in High Temperature Materials Laboratory,” ARPA-E Workshop on Topping Cycles for Higher Efficiency Power Generation,” Arlington, VA March 27, 2012
- **Invited Presentation**, “Test Methods for the Tensile Evaluation of Ceramic Fibers,” 2011 Materials Science & Technology Conference, Columbus, OC, October 19, 2011
- **Invited Lecturer**, Department of Mechanical Engineering Seminar, University of South Carolina, Columbia, SC September 15, 2011

- **Keynote Speaker**, Graduate Lunch, Society of Hispanic Professional Engineers Graduate Institute, Cincinnati OH, October 28, 2010
- **Invited lecturer**, “Mechanical Properties of Porous Materials,” at Symposium on Processing, Characterization and Properties of Honeycombs, Foams and Highly Porous Materials, 2010 Materials Science & Technology Conference, Houston, TX, October 17-21, 2010
- **Invited lecturer**, Plenary Lecture, “The Role of Materials on Power Generation and the Transformation, Distribution, Storage and Use of Energy,” at the 9<sup>th</sup> International Symposium on Ceramic Materials and Components for Energy and Environmental Applications, Shanghai, China November 11-14, 2008
- **Invited lecturer**, Plenary Lecture, “Materials for Energy,” at the 2nd. International Congress on Ceramics, held in Verona, Italy July 3, 2008
- **Invited lecturer**, “The Role of Materials in Power Generation, Transformation, Distribution, Storage and Use of Energy,” Technical Society of Knoxville, Knoxville, TN June 9, 2008.
- **Invited lecturer**, Plenary Lecture, “Materials for Power Generation, Energy Transformation, Transmission, Storage and Use”, 4<sup>th</sup> International Congress of Engineering, Autonomous University of Queretaro, Queretaro, Mexico, April 23, 2008
- **Invited lecturer**, “Materials for Energy,” Department Seminar, Mechanical Engineering and Mechanics, Georgia Institute of Technology, March 25, 2008
- **Invited lecturer**, “Materials for Power Generation, Energy Transmission, Energy Storage and Energy Use,” Plenary Talk at Spanish Fracture Group, Sigüenza, Spain, March 5, 2008
- **Invited lecturer**, “Materials for Energy,” 3<sup>rd</sup> Regional Congress on Materials Science and Engineering, Center for Advanced Physics and Applied Technology, UNAM, Queretaro, Mexico October 18, 2007
- **Banquet Keynote Speaker**, Society of Hispanic Professional Engineers, Reno, NV April 8, 2006.
- **Invited lecturer**, “Thermomechanical Limitations of Solid Oxide Fuel Cells,” 2<sup>nd</sup>. REAL SOFC Workshop, June 22-23, 2005 Simmerath-Einruhr, Germany
- **Invited lecturer**, “Probabilistic Design of Solid Oxide Fuel Cells,” Applied Mechanics, Materials & Reliability Worldwide Functional Excellence Conference, Cummins World Headquarters, Columbus, IN, February 21st, 2005
- **Invited lecturer**, “Probabilistic Design of Solid Oxide Fuel Cells,” Materials Science & Engineering Department Seminar, Northwestern University, June 1st, 2005
- **Invited lecturer**, “Reliability and Durability of Solid Oxide Fuel Cells,” Structural Mechanics Seminar Series, Georgia Institute of Technology, January 13, 2005

- **Invited lecturer**, “Columbia Accident Investigation,” Friends of ORNL, Oak Ridge, TN, December 13, 2004.
- **Invited lecturer**, “Effect of Hydrogen Reduction on the Thermomechanical Properties of Ni-Based Anodes for Solid Oxide Fuel Cells,” at the International Symposium on Solid Oxide Fuel Cell (SOFC) Materials and Technology, Cocoa Beach Florida, January 29, 2004
- **Invited lecturer**, “Development of Standardized Test methods for Ceramic matrix Composites,” at the 2003 Fulrath Award Symposium, 105<sup>th</sup> Annual Meeting of the American Ceramic Society, Nashville, TN April 27-30, 2003
- **Invited lecturer**, “Development of a New ASTM Fiber Test Standard,” Department Seminar, Department of Materials Science and Engineering, University of Tennessee-Knoxville, March 11, 2003.
- **Invited lecturer**, “Development of Standardized Test Methods for Ceramic Matrix Composites,” at Center for Electronic Ceramics, Dong-eui University, Busan, Korea, October 29, 2002.
- **Invited lecturer**, “A New ASTM Standard Test Method for the Tensile Evaluation of Ceramic Fibers,” at Center for Electronic Ceramics, Dong-eui University, Busan, Korea, October 29, 2002.
- **Invited lecturer**, “The Meaning of Precision and Bias In Standardized Test Methods,” at Department of Mechanical Engineering, Dong-eui University, Busan, Korea, October 29, 2002.
- **Invited lecturer**, “Development of Standardized Test Methods for Ceramic Matrix Composites,” at Korea’s Research Institute for Science and Standards, Daejeon, Korea, October 28, 2002.
- **Invited lecturer**, “Screening and Evaluation of Materials for Advanced Microturbine Recuperators,” at Materials Engineering Department Seminar, University of Alabama-Birmingham, September 17, 2002.
- **Invited lecturer**, “Status of Standardization Activities for Ceramic Matrix Composites in the United States,” at CREST-International Symposium on SiC/SiC Composite Materials R & D and Its Application to Advanced Energy Systems,” May 20, 2002, Kyoto, Japan.
- **Invited lecturer**, “Standardization of Test Procedures for the Tensile Evaluation of Ceramic Fibers,” at CREST-International Symposium on SiC/SiC Composite Materials R & D and Its Application to Advanced Energy Systems,” May 20, 2002, Kyoto, Japan.
- **Invited lecturer**, “Standardization of Test Procedures for the Tensile Evaluation of Ceramic Fibers,” Civil and Environmental Engineering Department Weekly Seminar, Vanderbilt University, Nashville, TN. December 10, 2001.

- **Invited lecturer**, “Evolution of Fiber Microstructure and its Effect on the Time-Dependent Deformation and Stress-Rupture Behavior of Oxide/Oxide Composites,” Meeting of the Mexican Academy of Materials, Cancun, Mexico August 28, 2000
- **Invited lecturer**, “Evolution of Fiber Microstructure and its Effect on the Time-Dependent Deformation and Stress-Rupture Behavior of Oxide/Oxide Composites,” University of Alabama-Tuscaloosa, Seminar, Materials Science & Engineering Department, October 19, 2000
- **Invited lecturer**, “Evolution of Fiber Microstructure and its Effect on the Time-Dependent Deformation and Stress-Rupture Behavior of Oxide/Oxide Composites,” at the 10th Iketani Conference on Materials Research, Karuizawa Prince Hotel, Karuizawa Japan, June 26-30, 2000
- **Invited lecturer**, “Stress-Rupture Behavior of Oxide/Oxide Composites,” Institute of Advanced Energy, Kyoto University, Kyoto Japan. July 3, 2000.
- **Invited lecturer**, “State of the Art of the Development and Characterization of Advanced Structural Ceramics“ at International Congress of Engineering Physics, Autonomous Metropolitan University, Mexico City, Mexico, October 4-8, 1999.
- **Invited lecturer**, “Development of Data Bases for Continuous Fiber-Reinforced Ceramic Matrix Composites in the United States,” at 9th International Symposium on Ultra-High Temperature Materials, JUTEMI '99, Japan's Ultra-High Temperature Materials Research Center, Tajimi City, Japan, September 9-10, 1999.
- **Invited lecturer**, “Thermomechanical Characterization of SiC/SiC CFCCs for Long-duration, High-Temperature Applications,” at Institute of Advanced Energy, Kyoto University, Kyoto Japan. September 6, 1999.
- **Invited lecturer**, “Assessment of Durability and Reliability of CFCCs Based on Stress-Rupture and Overstressing,” at Japan Fine Ceramics Center, Nagoya, Japan. September 8, 1999
- **Invited lecturer**, “Round-Robin Program to Determine Precision and Bias Statements for ASTM Test Standard C1292,” at Japan Fine Ceramics Center, Nagoya, Japan. September 8, 1999
- **Invited lecturer**, “Assessment of Durability and Reliability of CFCCs Based on Stress-Rupture and Overstressing,” at Institute of Industrial Science, Tokyo University, Tokyo, Japan. September 13, 1999
- **Invited lecturer**, “On the Relationships Between the Parameters of the Distributions of Fiber Strengths, Fiber Diameters and Breaking Loads,” at Institute of Industrial Science, Tokyo University, Tokyo, Japan. September 13, 1999
- **Invited lecturer**, “On the Relationships Between the Parameters of the Distributions of Fiber Strengths, Fiber Diameters and Breaking Loads,” at National Aerospace Laboratory, Chofu Airfield, Tokyo Japan. September 14, 1999.

- **Invited lecturer**, “Stress-Rupture and Stress-Relaxation Behavior of Carbon Fiber-Reinforced SiC CFCCs,” at National Aerospace Laboratory, Chofu Airfield, Tokyo Japan. September 14, 1999.
- **Invited lecturer**, “Shear Strength of Continuous Fiber-Reinforced Ceramic Matrix Composites,” at Dipartimento di Scienza dei Materiali ed Ingegneria Chimica, Politecnico di Torino, Turin, Italy, July 15, 1999
- **Invited lecturer**, “A Model of the Stress-Rupture of SiC/SiC Composites,” Invited Presentation, 3rd. IEA International Workshop on SiC/SiC Ceramic Composites for Fusion Structural Applications, Cocoa Beach, Florida January 29-30, 1999
- **Invited lecturer**, 100th Annual Meeting of the American Ceramic Society, Cincinnati, OH May 4, 1998
- **Invited lecturer**, 1998 Fall Meeting, Materials Research Society, Symposium on Recent Advances in Ceramic Matrix Composites, Boston, MA, “Test Methods to Assess the Role of Micro and Mesosstructure on the Macroscopic Mechanical Response of CFCCs,” Boston, MA, November 30-December 2, 1998
- **Invited lecturer**, 5th Japan International Symposium on Processing Technology and Applications of Ceramic Matrix Composites, Tokyo, Japan October 28-31, 1997
- **Invited lecturer**, *First International Workshop on Modeling of the Mechanical Behavior of Continuous Fiber Ceramic Composites*, Petten, The Netherlands, September 16, 1996

### Students Mentored:

- Elizabeth C. Thompson (2012)
- Valerie Garcia-Negron (2011, 2012)
- Andres Marquez
- Felix Calvente
- Cary Kuliasha
- Rosa Trejo
- 

### Reviewer:

- U.S. Department of Energy
- Air Force Office of Scientific Research
- Various U.S. State Energy Offices and Universities
- Academy of Sciences of the Czech Republic
- Ceramics International
- Composite Materials B.

- Composites Science and Technology
- Electrochimica Acta
- Engineering Fracture Mechanics
- Experimental Mechanics
- International Materials Reviews
- Journal of Fatigue
- Journal of Materials Research
- Journal of Materials Science
- Journal of Membrane Science
- Journal of the American Ceramic Society
- Langmuir
- Materials Research Bulletin
- Metallurgical and Materials Transactions
- National Science Foundation

## Publications:

### Books and Book Chapters

- G. Wicks, J. Simon, R. Zidan, E. Lara-Curzio, T. Adams, J. Zayas, A. Karkamkar, R. Sindelar and B. Garcia-Diaz, “Materials Challenges in Alternative and Renewable Energy (MCARE 2010),” *Ceramic Transactions*, vol. 224 (2011) Wiley
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50. J. Salem, M. Radovic and E. Lara-Curzio "Using the Double-Torsion Test Method to Determine the Fracture Toughness of Thin Ceramic Plates," presented at the 30th International Conference & Exposition on Advanced Ceramics and Composites, Cocoa Beach, FL January 22-27, 2006.
51. M. Radovic and E. Lara-Curzio "Fracture Toughness and Slow-Crack Growth Behavior of Ni-YSZ and YSZ as a Function of Porosity and Temperature," presented at the 30th International Conference & Exposition on Advanced Ceramics and Composites, Cocoa Beach, FL January 22-27, 2006.
52. M. Radovic, E. Lara-Curzio, Rosa Trejo, Hsin Wang and W. D. Porter, "Thermo-Physical Properties of Ni-YSZ as a Function of Temperature and Porosity," presented at the 30th International Conference & Exposition on Advanced Ceramics and Composites, Cocoa Beach, FL January 22-27, 2006.
53. B. Chelluri, A. A. Knuth, E. J. Shumaker, J. P. Barber, L. P. Franks, R. Trejo, E. Lara-Curzio and R. Sooryakumar "High-Performance SiC Processing via Magnetic Compaction and Pressureless Sintering," presented at the 30th International

- Conference & Exposition on Advanced Ceramics and Composites, Cocoa Beach, FL January 22-27, 2006.
54. E. Lara-Curzio, “Thermomechanical Limitations of Solid Oxide Fuel Cells,” **Invited Presentation** at 2<sup>nd</sup>. REAL SOFC Workshop, June 22, 2005 Simmerath-Einruhr, Germany
  55. E. Lara-Curzio, “Probabilistic Design of Solid Oxide Fuel Cells,” **Invited Presentation**, Materials Science & Engineering Department Seminar, Northwestern University, June 1st, 2005
  56. P. J. Maziasz, J. P. Shingledecker, B. A. Pint, N. D. Evans, Y. Yamamoto, K. L. More, and E. Lara-Curzio, “Overview of Creep Strength and Oxidation of Heat-Resistant Alloy Sheets and Foils for Compact Heat-Exchangers,” Presented at ASME Turbo Expo 2005, *Power for Land, Sea and Air*, June 6-9, 2005, Paper GT2005-68927
  57. E. Lara-Curzio, R. M. Trejo, K. L. More, P. J. Maziasz, and B. A. Pint, Evaluation and Characterization of Iron- and Nickel-Based Alloys for Microturbine Recuperators,” Presented at ASME Turbo Expo 2005, *Power for Land, Sea and Air*, June 6-9, 2005, Paper GT2005-68630
  58. E. Lara-Curzio, “Probabilistic Design of Solid Oxide Fuel Cells,” **Invited Presentation** at the Applied Mechanics, Materials & Reliability Worldwide Functional Excellence Conference, Cummins World Headquarters, Columbus, IN, February 21st, 2005
  59. E. Lara-Curzio and M. Radovic, “The Effect of Friction on the Magnitude of the Equibiaxial Strength Determined by the Ring-on-Ring Test,” Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 24-28, 2005
  60. M. Radovic, E. Lara-Curzio, Rosa Trejo, Thomas Watkins, Beth Armstrong, and Claudia Walls, “Effect of Thermal Cycling on the Properties of Ni-YSZ Anodes and Ni-YSZ/YSZ Bilayers,” Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 24-28, 2005
  61. R. Vaidyanathan, T. Phillips, J. Halloran, L. Riester, M. Radovic, W. Porter and E. Lara-Curzio, “Mechanical and Thermal Properties of Non-Aqueous Gelcast Celsian and SiAlON Ceramic Materials,” Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 24-28, 2005
  62. M. Radovic, T. Zhen, M. Barsoum, T. El-Raghy and E. Lara-Curzio, “Experimental Study of Dynamic Non-linear Behavior of  $Ti_3SiC_2$  and  $Ti_2AlC$  in 298-1537 K Temperature Range by Resonant Ultrasound Spectroscopy,” Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 24-28, 2005
  63. J. Lloyd, L. Fegely, S. Kalidindi, N. Orlovskaya, C. Rawn, S. Speakman, M. Radovic and E. Lara-Curzio, “Effect of the Environment on the Thermal and

- Structural Properties of  $\text{LaBO}_3$  (B=Co, Fe, And Ga) Based Perovskites,” Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 24-28, 2005
64. P. Pastila, E. Lara-Curzio, A-P. Nikkila and T. Mantyla, “Tensile Testing of SiC-Based Hot Gas Filters at 600°C Water Vapor,” Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 24-28, 2005
  65. E. Lara-Curzio, “Reliability and Durability of Solid Oxide Fuel Cells,” **Invited Lecture** at Structural Mechanics Seminar Series, Georgia Institute of Technology, January 13, 2005
  66. E. Lara-Curzio, Invited lecturer, “Columbia Accident Investigation,” Friends of ORNL, Oak Ridge, TN, December 13, 2004
  67. E. Lara-Curzio, R. M. Trejo, K. L. More, P. J. Maziasz, and B. A. Pint, “Screening and Evaluation of Materials for Advanced Microturbine Recuperators,” Presented at ASME Turbo Expo 2004, June 14-17, 2004 Vienna, Austria, Paper GT-2004-54255
  68. P. J. Maziasz, B. A. Pint, J. P. Shingledecker, K. L. More, N. D. Evans and E. Lara-Curzio, “Austenitic Stainless Steels and Alloys With Improved High-Temperature Performance for Advanced Microturbine Recuperators,” Presented at ASME Turbo Expo 2004, June 14-17, 2004 Vienna, Austria, Paper GT-2004-54239
  69. E. Lara-Curzio, H. Wang, S. D. Nunn and R. Trejo, “Quantitative Assessment of Sub-Surface Damage, Mass Loss and Residual Strength in Coated Structures Using the Transient Planar Source Test Method,” Presented at the 106th Annual Meeting and Exposition of The American Ceramic Society, Indianapolis, IN April 20, 2004.
  70. E. Lara-Curzio, T. R. Watkins, R. Trejo, C. R. Luttrell, M. Radovic, W. Li, J. Lannutti and D. England, “Effect of Temperature and  $\text{H}_2$ -Induced Reduction on the Magnitude of Residual Stresses in YSZ-NiO/YSZ Bi- Layers,” Presented at the 106th Annual Meeting and Exposition of The American Ceramic Society, Indianapolis, IN April 21, 2004.
  71. M. Radovic, E. Lara-Curzio, B. L. Armstrong, C. A. Walls, “Elastic Properties, Biaxial Strength and Fracture Toughness of Nickel-Based Anode Materials for Solid Oxide Fuel Cells,” Presented at the 106th Annual Meeting and Exposition of The American Ceramic Society, Indianapolis, IN April 21, 2004.
  72. M. Radovic, E. Lara-Curzio, L. Riester, B. Sears, “Comparison of Different Experimental Techniques for Determination of Elastic Properties of Solids,” Poster Presentation at the 106th Annual Meeting and Exposition of The American Ceramic Society, Indianapolis, IN April 20, 2004.
  73. M. Radovic, E. Lara-Curzio, B. L. Armstrong, P. F. Tortorelli, L. R. Walker, “Effect of Hydrogen Reduction on the Microstructure and Elastic Properties of Ni-Based Anodes for SOFCs,” Presented at the 106th Annual Meeting and Exposition of The American Ceramic Society, Indianapolis, IN April 21, 2004.

74. E. Lara-Curzio, "Effect of Hydrogen Reduction on the Thermomechanical Properties of Ni-Based Anodes for Solid Oxide Fuel Cells," **Invited Presentation** at International Symposium on Solid Oxide Fuel Cell (SOFC) Materials and Technology, Cocoa Beach Florida, January 29, 2004
75. E. Lara-Curzio, "Properties of Continuous Fiber-Reinforced Ceramic Matrix Composites for Gas Turbine Applications," Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 25-30, 2004
76. T. Hinoki, E. Lara-Curzio, L. L. Snead, "Effect of Interphase on Transthickness Tensile Strength of High-Purity Silicon Carbide Composites," Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 25-30, 2004
77. P. F. Tortorelli, K. L. More, E. Lara-Curzio, M. Ferber, J. R. Keiser and D. P. Stinton, "Facilities for Environmental testing of Ceramic Monoliths, Composites and Coatings for use in Combustion Applications," Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 25-30, 2004
78. K. L. More, E. Lara-Curzio, P. Tortorelli, A. Szweda, M. Stewart and D. Carruthers, "Evaluating the High-Temperature Stability of an Oxide/Oxide Composite Material at High Water Vapor Pressure," Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 25-30, 2004
79. M. Radovic, E. Lara-Curzio, B. L. Armstrong, L. R. Walker, P. Tortorelli, C. A. Walls, "Reaction Kinetics and Structural Changes Associated with the Hydrogen Reduction of NiO/YSZ," Presented at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 29, 2004
80. M. Radovic, E. Lara-Curzio, B. L. Armstrong, C. A. Walls, "Elastic Properties, Equibiaxial Strength and Fracture Toughness of 8mol%YSZ Electrolytes for SOFCs," Poster Presentation at 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 28, 2004
81. K. Breder, E. Lara-Curzio, L. Riester, "Strength Testing System for Ceramic Grains," 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 27, 2004
82. M. Radovic, E. Lara-Curzio, L. Riester, "Evaluation of Four Different Experimental Techniques for Determination of Elastic Properties of Solids," 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 27, 2004
83. T. Nozawa, E. Lara-Curzio, Y. Katoh, and A. Kohyama, "Experimental and Analytical Approaches to Account for Specimen Size Effects on the Tensile Properties of CMCs" 28<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 27, 2004

84. E. Lara-Curzio and H. Wang, "Assessment of Mass Loss and Residual Strength of RCC Materials for Space Shuttle Leading Edge Panels," Technical Interchange Meeting, Kennedy Space Center, Florida May 18, 2003
85. E. Lara-Curzio, R. Trejo, K. L. More, B. A. Pint, P.J. Maziasz, "Screening and Evaluation of Candidate Materials for Advanced Microturbine Recuperators," Paper GT2003-38915, ASME Turbo Expo, Atlanta GA., June 18, 2003
86. E. Lara-Curzio, R. Trejo, K. L. More, B. A. Pint, P.J. Maziasz, "Residual Properties of Microturbine Recuperators," Paper GT2003-38913, ASME Turbo Expo, Atlanta GA., June 18, 2003,
87. P.J. Maziasz, B. A. Pint, R.W. Swindeman, K. L. More, and E. Lara-Curzio, "Selection, Development and Testing of Stainless Steels and Alloys for High-Temperature Recuperator," Paper GT2003-38762, ASME Turbo Expo, Atlanta GA., June 18, 2003,
88. E. Lara-Curzio, "Development of Standardized Test methods for Ceramic matrix Composites," 2003 Fulrath Award Symposium, 105<sup>th</sup> Annual Meeting of the American Ceramic Society, Nashville, TN April 27-30, 2003
89. E. Lara-Curzio, "Reliability and Durability of Solid Oxide Fuel Cell Materials & Components," SECA Core Technology Program Review, Sacramento, CA, February 23, 2003
90. E. Lara-Curzio, "Development of a New ASTM Fiber Test Standard," Department Seminar, Department of Materials Science and Engineering, University of Tennessee-Knoxville, March 11, 2003.
91. S. Hayes, W. Sherwood, D. Stiles, C. Voorhees, R. Dinwiddie, E. Lara-Curzio, W. Porter, L. Riester, H. Wang, "Thermal Properties of Polycarbosilane Derived Porous Silicon Carbide Composites," Presented at the 27<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 26-31, 2003.
92. R. Rodriguez-Verdugo, O. O. Ochoa, and E. Lara-Curzio, "Tensile Evaluation of Ceramic Foam Ligaments," Presented at the 27<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 26-31, 2003.
93. P. H. Pastila, E. Lara-Curzio, A. Nikkila, T.A. Mantyla, "Fracture Behavior of SiC-Based, Clay-Bonded Hot Gas Filters," Presented at the 27<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 26-31, 2003.
94. M. Radovic, E. Lara-Curzio, T. R. Armstrong, C. A. Walls, "Effect of Thickness and Porosity on the Mechanical Properties of Planar Components for Solid Oxide Fuel Cells," Presented at the 27<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 26-31, 2003.
95. T. Hinoki, E. Lara-Curzio, and L. L. Snead, "Transthickness Tensile Strength of SiC/SiC Composites," Presented at the 27<sup>th</sup> Annual Cocoa Beach Conference &

- Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 26-31, 2003.
96. T. Nozawa, Y. Katoh, A. Kohyama, E. Lara-Curzio, "Specimen Size Effect on the Tensile and Shear Properties of the High-Crystalline and High-Dense SiC/SiC Composites," Presented at the 27<sup>th</sup> Annual Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, Cocoa Beach Florida, January 26-31, 2003
  97. T. Hinoki, E. Lara-Curzio and L.L. Snead, "Mechanical Properties of SiC Fiber-Reinforced CVI-SiC Matrix Composites," American Nuclear Society 15th Topical Meeting 15th Technology of Fusion Energy November 17-21, 2002 - Washington, D.C.
  98. E. Lara-Curzio, "Development of Standardized Test Methods for Ceramic Matrix Composites," **Invited Presentation**, Center for Electronic Ceramics, Dong-eui University, Busan, Korea, October 29, 2002.
  99. E. Lara-Curzio, "A New ASTM Standard Test Method for the Tensile Evaluation of Ceramic Fibers," **Invited Presentation**, Center for Electronic Ceramics, Dong-eui University, Busan, Korea, October 29, 2002.
  100. E. Lara-Curzio, "The Meaning of Precision and Bias In Standardized Test Methods," **Invited Presentation** at Department of Mechanical Engineering, Dong-eui University, Busan, Korea, October 29, 2002.
  101. E. Lara-Curzio, "Development of Standardized Test Methods for Ceramic Matrix Composites," **Invited Presentation** at Korea's Research Institute for Science and Standards, Daejeon, Korea, October 28, 2002.
  102. E. Lara-Curzio, "Screening and Evaluation of Materials for Advanced Microturbine Recuperators," **Invited Presentation** at Materials Engineering Department Seminar, University of Alabama-Birmingham, September 17, 2002.
  103. E. Lara-Curzio, P. J. Maziasz, B. A. Pint, M. Stewart, D. Hamrin, N. Lipovich, and Dan DeMore, "Test Facility for Screening and Evaluating Candidate Materials for Advanced Microturbine Recuperators," Presented at ASME TURBO EXPO 2002, June 3-6, 2002 Amsterdam, The Netherlands, Paper GT-2002-30581
  104. E. Rocha-Rangel, P. F. Becher, and E. Lara-Curzio, "Influence of Carbon on the Interfacial Contact Angle Between Alumina and Liquid Aluminum," Presented at Surface Analysis '02, 24<sup>th</sup> Annual Topical Symposium on Applied Surface Analysis, Vanderbilt, University, Nashville, TN May 20-22, 2002.
  105. E. Lara-Curzio, "Status of Standardization Activities for Ceramic Matrix Composites in the United States," **Invited Presentation** at CREST-International Symposium on SiC/SiC Composite Materials R & D and Its Application to Advanced Energy Systems," May 20-22, 2002, Kyoto, Japan.
  106. E. Lara-Curzio, "Standardization of Test Procedures for the Tensile Evaluation of Ceramic Fibers," **Invited Presentation** at CREST-International Symposium on SiC/SiC Composite Materials R & D and Its Application to Advanced Energy Systems," May 20-22, 2002, Kyoto, Japan.

107. T. Nozawa, E. Lara-Curzio, Y. Katoh and A. Kohyama, "Specimen Size Effect on the In-Plane Shear Properties of SiC/SiC Composites," at the 104<sup>th</sup> Annual Meeting and Exposition of the American Ceramic Society, St. Louis, MO May 1, 2002
108. T. Hinoki and E. Lara-Curzio, "Transthickness Tensile Strength of Oxide-Oxide Ceramic Matrix Composites," at the 104<sup>th</sup> Annual Meeting and Exposition of the American Ceramic Society, St. Louis, MO May 1, 2002
109. M. A. Burke, D. G. Thompson, J. Morrison, J. E. Lane, S. C. Butner, A. Szweda and E. Lara-Curzio, "Mechanical Properties Testing for Database and Constitutive Modeling of CMC Composites," Presented at the 17<sup>th</sup> Annual Meeting of the American Society for Composites,
110. M. Gasch, J. Wan, K. Liu, E. Lara-Curzio and A. Mukherjee, "Creep of Silicon Nitride/Silicon Carbide Ceramic Nanocomposites," Annual Meeting of The Minerals, Metals & Materials Society, Seattle, Washington, February 2002
111. E. Stankiewicz and E. Lara-Curzio, "Room Temperature O-Ring Tensile Strength of SiC Foam as a Quality Control Method," Presented at the 26th Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 13-18, 2002
112. E. Stankiewicz and E. Lara-Curzio, "Room Temperature O-Ring Tensile Strength of SiC Foam as a Function of Temperature," Presented at the 26th Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 13-18, 2002
113. T. Nozawa, E. Lara-Curzio, and A. Kohyama, "Stress-Rupture and Stress-Relaxation Behavior of PIP SiC/SiC Composites," Presented at the 26th Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 13-18, 2002
114. E. Lara-Curzio, "Standardization of Test Procedures for the Tensile Evaluation of Ceramic Fibers," Civil and Environmental Engineering Department Weekly Seminar, Vanderbilt University, Nashville, TN. December 10, 2001
115. E. Lara-Curzio, M-L, Antti, and R. Warren, "The Effect of Specimen Size and Temperature on the Notch-Sensitivity of Oxide-Oxide Ceramic Matrix Composites," 10th. International Fracture Conference, Honolulu, HI December 1-6, 2001
116. R. Silberglitt, G. A. Danko, R. W. Bruce, R. L. Bruce, G. A. Kriegsmann, and E. Lara-Curzio, "Application of Microwave Joining of SiC: Mechanical Strength of Joints in Commercial Materials and Long Tube Joining", Presented at the 8th International Conference on Microwave and High Frequency Heating, Bayreuth, Germany, September 5, 2001.
117. C.Y. Jones, S.L. Marshall, C.J. Rawn, B.C. Chakoumakos, and E. Lara-Curzio, "High-Pressure Cells for Neutron Scattering Experiments on Clathrate Hydrates," Presented at the American Crystallographic Association, Buffalo, NY, 2001

118. E. Lara-Curzio, “Mil Handbook 17 on Ceramic Matrix Composites: Overview of Test Methods,” 25th Annual Conference on Composites Materials and Structures, January 23, 2001, Cape Canaveral, FL.
119. M. Antti and E. Lara-Curzio, “Effect of Notches, Specimen Size, and Fiber Orientation on the Monotonic Tensile Behavior of Continuous Fiber Reinforced Oxide/Oxide Composites at Ambient and Elevated Temperatures,” Presented at 25th Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 21-26, 2001.
120. T. Nozawa, Y. Katoh, A. Kohyama, and E. Lara-Curzio, “Effect of Specimen Size and Fiber Orientation on the Tensile Properties of SiC/SiC Composites,” Presented at 25th Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 21-26, 2001.
121. M. Antti, E. Lara-Curzio, and M.K. Ferber, “Damage Evolution in Continuous Fiber-Reinforced Oxide/Oxide Composites under Cyclic Loading,” Poster Presentation at 25th Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 21-26, 2001.
122. E. Lara-Curzio and D. Garcia Jr., “Strength Statistics of Fiber Bundles: The Effect of Diameter Variation Along and Among Fibers, on the Determination of the Parameters of the Distribution of Fiber Strengths,” Poster Presentation at 25th Annual International Conference on Advanced Ceramics and Composites, Cocoa Beach, Florida January 21-26, 2001.
123. T. Hinoki, L.L. Snead, E. Lara-Curzio, Y.S. Park, Y. Katoh, and A. Kohyama, “Tensile Properties of SiC/SiC Composites with Unidirectional Stoichiometric SiC Fiber,” Presented at 4<sup>th</sup> IEA workshop on SiC/SiC Ceramic Matrix Composites for Fusion Structural Applications, October 12/13, 2000, Frascati, Italy
124. T. Nozawa, Y. Katoh, A. Kohyama, and E. Lara-Curzio, “Size Effects on the Tensile Properties for S/W and 3-D SiC/SiC Composites,” Presented at 4<sup>th</sup> IEA workshop on SiC/SiC Ceramic Matrix Composites for Fusion Structural Applications, October 12/13, 2000, Frascati, Italy
125. E. Lara-Curzio, “Evolution of Fiber Microstructure and its Effect on the Time-Dependent Deformation and Stress-Rupture Behavior of Oxide/Oxide Composites,” University of Alabama-Tuscaloosa, Seminar, Materials Science & Engineering Department, October 19, 2000
126. E. Lara-Curzio, “Evolution of Fiber Microstructure and its Effect on the Time-Dependent Deformation and Stress-Rupture Behavior of Oxide/Oxide Composites,” Meeting of the Mexican Academy of Materials, Cancun, Mexico August 28, 2000
127. T. Nozawa, T. Hinoki, Y. Katoh, A. Kohyama, E. Lara-Curzio and S. P. Lee, “Effect of Specimen Geometry on Tensile Properties of SiC/SiC Composites,” Presented at ACCM 2000, Second Asian-Australasian Conference on Composite Materials, 18-20 August, 2000 Kyongju Hilton Hotel, Kyongju, Korea
128. E. Lara-Curzio, “Stress-Rupture Behavior of Oxide/Oxide Composites,” at Institute of Advanced Energy, Kyoto University, Kyoto Japan. July 3, 2000

129. E. Lara-Curzio, “Evolution of Fiber Microstructure and its Effect on the Time-Dependent Deformation and Stress-Rupture Behavior of Oxide/Oxide Composites,” **Invited Presentation** at the 10th Iketani Conference on Materials Research, Karuizawa Prince Hotel, Karuizawa Japan, June 26-30, 2000
130. T. Nozawa, T. Hinoki, Y. Katoh, A. Kohyama, E. Lara-Curzio, “Influence of Specimen Geometry on Tensile Properties of 3-D SiC/SiC Composites,” Poster Presentation at 102<sup>nd</sup> Annual Meeting & Exposition of the American Ceramic Society, St. Louis, MO April 29-May 3, 2000.
131. E. Lara-Curzio, “Standards for Ceramic Matrix Composites,” Presentation at 102<sup>nd</sup> Annual Meeting & Exposition of the American Ceramic Society, St. Louis, MO April 29-May 3, 2000
132. E. Lara-Curzio and K. L. More, “Stress-Rupture of Nextel™ 720 fiber-reinforced Aluminosilicate Composites: The Role of Microstructural Evolution,” Presented at the 24th Annual Cocoa Beach Conference and Exposition, Cocoa Beach, Florida January 25, 2000.
133. S. Sambasivan, K. A. Steiner, and E. Lara-Curzio, “Processing of Oxide Coatings for CMCs,” Presented at the 24th Annual Cocoa Beach Conference and Exposition, Cocoa Beach, Florida January 25, 2000.
134. E. Lara-Curzio, “SiC/SiC Thermo-physical Properties Including Creep Strength” Presented at the International Town Meeting on SiC/SiC Design and Material Issues for Fusion Systems, Oak Ridge National Laboratory, Oak Ridge, TN. January 18-19, 2000.
135. E. Lara-Curzio and L. L. Snead, “Analysis of Irradiation-Induced Residual Stresses in Hi-Nicalon™ fiber-reinforced CVI-SiC Matrix Composites,” Poster Presentation, 9th International Conference on Fusion Reactor Materials, Colorado Springs, CO. October 11-15, 1999.
136. E. Lara-Curzio, “State of the Art of the Development and Characterization of Advanced Structural Ceramics,” **Invited Presentation**, International Congress of Engineering Physics, Autonomous Metropolitan University, Mexico City, Mexico, October 4-8, 1999.
137. E. Lara-Curzio, “Development of Data Bases for Continuous Fiber-Reinforced Ceramic Matrix Composites in the United States,” **Invited Presentation**, 9th International Symposium on Ultra-High Temperature Materials, JUTEMI '99, Japan's Ultra-High Temperature Materials Research Center, Tajimi City, Japan, September 9-10, 1999.
138. E. Lara-Curzio, “Thermomechanical Characterization of SiC/SiC CFCCs for Long-duration, High-Temperature Applications,” **Invited Presentation** at Institute of Advanced Energy, Kyoto University, Kyoto Japan. September 6, 1999.
139. E. Lara-Curzio, “Assessment of Durability and Reliability of CFCCs Based on Stress-Rupture and Overstressing,” **Invited Presentation** at Japan Fine Ceramics Center, Nagoya, Japan. September 8, 1999

140. E. Lara-Curzio, “Round-Robin Program to Determine Precision and Bias Statements for ASTM Test Standard C1292,” **Invited Presentation** at Japan Fine Ceramics Center, Nagoya, Japan. September 8, 1999
141. E. Lara-Curzio, “Assessment of Durability and Reliability of CFCCs Based on Stress-Rupture and Overstressing,” **Invited Presentation** at Institute of Industrial Science, Tokyo University, Tokyo, Japan. September 13, 1999
142. E. Lara-Curzio, “On the Relationships Between the Parameters of the Distributions of Fiber Strengths, Fiber Diameters and Breaking Loads,” **Invited Presentation** at Institute of Industrial Science, Tokyo University, Tokyo, Japan. September 13, 1999
143. E. Lara-Curzio, “On the Relationships Between the Parameters of the Distributions of Fiber Strengths, Fiber Diameters and Breaking Loads,” **Invited Presentation** at National Aerospace Laboratory, Chofu Airfield, Tokyo Japan. September 14, 1999.
144. E. Lara-Curzio, “Stress-Rupture and Stress-Relaxation Behavior of Carbon Fiber-Reinforced SiC CFCCs,” **Invited Presentation** at National Aerospace Laboratory, Chofu Airfield, Tokyo Japan. September 14, 1999.
145. T. Besmann, J. Klett, J. Henry, and E. Lara-Curzio, “Carbon Composite Bipolar Plate for PEM Fuel Cells,” Presented at the 1999 Review Conference on Fuel Cell Technology, Chicago IL, August 3-5, 1999.
146. E. Lara-Curzio, “Shear Strength of Continuous Fiber-Reinforced Ceramic Matrix Composites,” **Invited Presentation** at Dipartimento di Scienza dei Materiali ed Ingegneria Chimica, Politecnico di Torino, Turin, Italy, July 15, 1999
147. E. Lara-Curzio “Stress-Rupture and Overstressing: A Discussion of testing Methodologies to Assess the Durability and Reliability of Continuous Fiber-Reinforced Ceramic Matrix Composites,” Presented at the 12th International Conference on Composite Materials ICCM12, Paris, France July 4, 1999
148. E. Lara-Curzio, “Reliability of Continuous Fiber-Reinforced Ceramic Composites under Stress-Rupture Conditions in Oxidizing Environments,” Proceedings of International Conference on Recent Developments in Durability Analysis of Composite Systems, Brussels, July 11-14, 1999
149. E. Lara-Curzio, “Stress-Rupture and Overstressing: A Discussion of Testing Methodologies to Assess the Durability and Reliability of CFCCs at Elevated Temperatures,” Presented at Symposium on Mechanical, Thermal and Environmental Properties and Performance of CFCCs, American Society for Testing and Materials, Seattle, WA, May 18, 1999
150. E. Lara-Curzio and M. Singh, “Time-Dependent Deformation of C/SiC CFCCs in Air at Elevated temperatures: The Role of Fiber Degradation on Stress-Rupture and Stress-Relaxation,” Presented at Symposium on Mechanical, Thermal and Environmental Properties and Performance of CFCCs, American Society for Testing and Materials, Seattle, WA, May 18, 1999

151. M. G. Jenkins, S. T. Gonczy, E. Lara-Curzio, and L. P. Zawada, "Multiple-Laboratory Round-Robin Study of the Flexural, Shear and tensile Behavior of a Two-Dimensional Nicalon™/Sylramic® Ceramic Matrix Composite," Presented at Symposium on Mechanical, Thermal and Environmental Properties and Performance of CFCCs, American Society for Testing and Materials, Seattle, WA, May 18, 1999
152. S. Graham, D. L. McDowell, E. Lara-Curzio, R. B. Dinwiddie, H Wang and W. Porter, "Effects of Microstructural Damage on the Thermal Diffusivity of Ceramic Matrix Composites," Presented at Symposium on Mechanical, Thermal and Environmental Properties and Performance of CFCCs, American Society for Testing and Materials, Seattle, WA, May 18, 1999
153. P. F. Tortorelli, E. Lara-Curzio, C. G. McKamey, B. A. Pint, I. G. Wright, and R. R. Judkins, "Iron-Aluminide Filters for IGCCs and PFBCs," Thirteenth Fossil Energy Materials Conference, Knoxville, TN May 12, 1999
154. M. G. Jenkins, P. L. Van Landeghen, E. Lara-Curzio, and J. A. Salem, "Experimental Mechanics and the Verification of Standardized Test Methods for Ceramic Matrix Composites," in Proceedings of the 1999 International Congress on Experimental Mechanics, Society for Experimental Mechanics, Bethel, Connecticut (1999).
155. E. Lara-Curzio and C. M. Russ, "Why it is Necessary to Measure Each Fiber Diameter When Estimating the Parameters of the Distribution of Fiber Strengths," Presented at 23rd Annual Cocoa Beach Conference and Exposition, Cocoa Beach, Florida January 25, 1999
156. E. Lara-Curzio and M. G. Jenkins, "Multi-Laboratory Round Robin Study of the Shear Behavior of a Continuous Fiber-Reinforced Ceramic Matrix Composite," Presented at 23rd Annual Cocoa Beach Conference and Exposition, Cocoa Beach, Florida January 28, 1999
157. E. Lara-Curzio, "Development and Assessment of a Test Method to Determine the Hoop Strength of CFCC Tubular Specimens by Internal Pressurization," Presented at the 23rd Annual Conference on Composites, Materials and Structures, ITAR Restricted Sessions, Cocoa Beach, Florida January 27, 1999
158. M. G. Jenkins, T. Gonczy, E. Lara-Curzio, and L. P. Zawada, "Multi-Laboratory Round Robin Results For A Single CFCC: Input For Test Standards, Design Codes, and Data Bases," Presented at the 23rd Annual Conference on Composites, Materials and Structures, ITAR Restricted Sessions, Cocoa Beach, Florida January 27, 1999
159. E. Lara-Curzio, "A Model of the Stress-Rupture of SiC/SiC Composites," **Invited Presentation**, 3rd. IEA International Workshop on SiC/SiC Ceramic Composites for Fusion Structural Applications, Cocoa Beach, Florida January 29-30, 1999
160. E. Lara-Curzio, "Test Methods to Assess the Role of Micro and Mesostructure on the Macroscopic Mechanical Response of CFCCs," **Invited Presentation**, 1998

- Fall Meeting, Materials Research Society, Boston, MA, November 30-December 2, 1998
161. M. G. Jenkins, S. T. Gonczy, E. Lara-Curzio, L. P. Zawada, “ Mechanical and Thermal Property Generation for the Development of a Comprehensive Data Base for CFCCs,” 1998 Fall Meeting, Materials Research Society, Boston, MA, November 30-December 2, 1998
  162. M. G. Jenkins, and E. Lara-Curzio, “ Standards, Design Codes and Data Bases for CFCCs in the US,” 1998 Fall Meeting, Materials Research Society, Boston, MA, November 30-December 2, 1998
  163. K. L. More, P. F. Tortorelli, H. T. Lin, E. Lara-Curzio, and R. A. Lowden, “Degradation of BN Interfaces in CFCCs,” 1998 Fall Meeting, The Materials Research Society, Boston, MA November 30, 1998
  164. L. L. Snead, and E. Lara-Curzio, “Interphase Integrity of Neutron Irradiated SiC Composites,” Presented at *Symposium on Microstructural Processes in Irradiated Materials*, Materials Research Society, November 30-December 2, 1998.
  165. E. Lara-Curzio, P. F. Tortorelli, K. L. More, “Oxidation Effects on the Time-Dependent Failure of Fiber-Reinforced SiC at Elevated Temperatures,” **Invited Presentation**, Damage Processes in Advanced Materials, TMS, 1998
  166. E. Lara-Curzio, “Environmental Effects on the Reliability of CFCCs,” **Invited Presentation**, 100th Annual Meeting of the American Ceramic Society, Cincinnati, OH May 4, 1998.
  167. P. F. Tortorelli, E. Lara-Curzio, C. G. McKamey, B. A. Pint, I. G. Wright, and R. R. Judkins, “Evaluation of Iron Aluminides for Hot-Gas Filter Applications,” Symposium on High-Temperature Particulate Cleanup for Advanced Coal-Based Power Systems,” Birmingham, AL April 21, 1998
  168. E. Lara-Curzio, “Life Prediction of CFCCs under Stress-Rupture Conditions,” Presented at 22nd Annual Cocoa Beach Conference and Exposition, Cocoa Beach, Florida January 20-24, 1998
  169. W. Y. Lee, E. Lara-Curzio, and K. L. More, “Multilayered Oxide Interface Concept for Ceramic Matrix Composites,” Presented at 22nd Annual Cocoa Beach Conference and Exposition, Cocoa Beach, Florida January 20-24, 1998
  170. E. Lara-Curzio, “Effect of Overstress on the Reliability of Continuous Fiber Ceramic Composites under Stress-Rupture Conditions,” Presented at 22nd Annual Cocoa Beach Conference and Exposition, ITAR Restricted Sessions, Cocoa Beach, Florida January 25-30, 1998
  171. E. Lara-Curzio , “Development of Test Standards for Continuous Fiber Ceramic Composites in the United States,” **Invited Presentation**, International Symposium on Ceramic Matrix Composites, 5th Japan International SAMPE Symposium & Exhibition, Tokyo, Japan October 28-31, 1997.
  172. E. Lara-Curzio, “A Model of the Oxidation-Induced Stress-Rupture of Ceramic Matrix Composites with Carbonaceous Fiber Coatings,” **Invited Presentation**

- International Symposium on Ceramic Matrix Composites, 5th Japan International SAMPE Symposium & Exhibition, Tokyo, Japan October 28-31, 1997
173. E. Lara-Curzio , “A Model for the Stress-Rupture of Fiber-Reinforced Ceramic Composites at Intermediate Temperatures,” Presented at the 4th. International Conference on Composite Engineering ICCE/4, July 7-11, 1997. Kohala Coast, Hawaii.
  174. E. Lara-Curzio, “Oxidation-Induced Stress-Rupture of Fiber Bundles,” Presented at the ASME Turbo Expo '97. International Gas Turbine Institute Meeting, Orlando, FL. June 2-5, 1997
  175. D. P. Stinton, E. R. Kupp, E. Lara-Curzio, R. A. Lowden, and T. M. Besmann, “Fiber Protection Layers for Continuous Fiber Ceramic Matrix Composites,” *Presented at the 99th Annual Meeting and Exposition of the American Ceramic Society, Cincinnati, OH, May 4-7, 1997*
  176. W. Y. Lee, K. M. Cooley, E. Lara-Curzio, and K. L. More, “Preparation of silica and zirconia coatings by CVD for Nicalon™ /SiC Composites,” *Presented at the 99th Annual Meeting and Exposition of the American Ceramic Society, Cincinnati, OH, May 4-7, 1997*
  177. K. Jakus, S. Widjaja, J. E. Ritter, E. Lara-Curzio, E. Y. Sun, T. R. Watkins, and J. J. Brennan, “High-Temperature Load Transfer in Nicalon™ /BMAS Glass-Ceramic Matrix Composites,” *Presented at the 99th Annual Meeting and Exposition of the American Ceramic Society, Cincinnati, OH, May 4-7, 1997*
  178. M. K. Ferber, E. Lara-Curzio, and A. A. Wereszczack, “Time-Dependent Failure of Structural Ceramics and Ceramic Matrix Composites at Elevated Temperatures,” *Presented at the 99th Annual Meeting and Exposition of the American Ceramic Society, Cincinnati, OH, May 4-7, 1997*
  179. S. Widjaja, K. Jakus, J. E. Ritter, E. Lara-Curzio, E. Y. Sun, T. R. Watkins, and J. J. Brennan, “High-Temperature Load Transfer in Nicalon™ /BMAS Glass-Ceramic Matrix Composites,” *Presented at the 21st Annual Conference on Composites, Advanced Ceramics, Materials and Structures, Cocoa Beach, Florida January 16, 1997.*
  180. E. Lara-Curzio, P. F. Tortorelli and K. L. More, “Stress-Rupture of Nicalon™ /SiC at Intermediate Temperatures,” *Presented at the 21st Annual Conference on Composites, Advanced Ceramics, Materials and Structures, Cocoa Beach, Florida January 15, 1997.*
  181. E. Lara-Curzio, and C. M. Russ “Redistribution of Internal Stresses and Residual Stresses in Composites: An Approach for Increasing the Matrix Cracking Stress,” *Presented at the 21st Annual Conference on Composites, Advanced Ceramics, Materials and Structures, Cocoa Beach, Florida January 14, 1997.*
  182. W. Lee, K. M. Cooley, E. Lara-Curzio, T. R. Watkins, S. T. Misture, E. Kupp, and K. L. More, “Phase Transformation as a Means for Promoting Weak Interfacial Behavior in Ceramic Matrix Composites,” *Presented at the 21st Annual Conference*

- on Composites, Advanced Ceramics, Materials and Structures*, Cocoa Beach, Florida January 14, 1997.
183. E. R. Kupp, E. Lara-Curzio, D. P. Stinton, T. M. Besmann, "Screening of Interface Coating Materials Using Minicomposites," *Presented at the 21st Annual Conference on Composites, Advanced Ceramics, Materials and Structures*, Cocoa Beach, Florida January 14, 1997.
  184. K. L. More, P. F. Tortorelli, H. T. Lin, E. Lara-Curzio, A. Clark, and R. A. Lowden, "Stability of BN Interfaces in Several CFCC Systems During Oxidation," *Presented at the 21st Annual Conference on Composites, Advanced Ceramics, Materials and Structures*, Cocoa Beach, Florida January 15, 1997.
  185. E. Lara-Curzio, "Mechanical Characterization of CFCCs," Presentation at CFCC Program Review Meeting, Washington DC December 17, 1996.
  186. E. Lara-Curzio, M. K. Ferber, P. F. Tortorelli, and K. L. More, "Stress-Rupture of CFCCs," Poster Presentation at CFCC Annual Program Review Meeting, San Diego, CA September 1996
  187. E. Lara-Curzio, M. K. Ferber and P. F. Tortorelli, "Interface Oxidation and Stress-Rupture of Nicalon™/SiC CFCCs at Intermediate Temperatures," Presented at CMMC 96, San Sebastian, Spain, September 9-12, 1996.
  188. E. Lara-Curzio, "Review of Model of Progressive Fiber Debonding and Sliding," **Invited Presentation** at First International Workshop on Modeling of Continuous Fiber Ceramic Composites, Petten, The Netherlands September 16-18, 1996
  189. E. Lara-Curzio and Christiana M. Russ, "On the Matrix Cracking Stress and the Redistribution of Residual Stresses in Brittle Matrix Composites," Presented at the First International Workshop on Modeling of Continuous Fiber Ceramic Composites, Petten, The Netherlands September 16-18, 1996
  190. E. Lara-Curzio, "Tensile Evaluation of Minicomposites," at the 2nd. Annual Meeting on Interfaces, Knoxville, TN, June 19-20, 1996
  191. E. Lara-Curzio and M. K. Ferber, "Shear Strength of Continuous Fiber Reinforced Ceramic Composites," Presented at the Symposium on Thermal and Mechanical Test Methods and Behavior of CFCCs, Cocoa Beach Florida, January 8, 1996
  192. E. Lara-Curzio, S. Raghuraman, J. Keiser, M. K. Ferber, J. Neogi, B. Harkins and J. Simpson, "Thermomechanical Characterization of CFCC Tubular Components," Presented at the Symposium on Thermal and Mechanical Test Methods and Behavior of CFCCs, Cocoa Beach Florida, January 8, 1996
  193. M. G. Jenkins, J. P. Piccola and E. Lara-Curzio, "Influence of Bending, Test Mode, Test Rate, Specimen Geometry and Grip System on the Tensile Mechanical Behavior of CFCCs," Presented at the Symposium on Thermal and Mechanical test Methods and Behavior of CFCCs, Cocoa Beach Florida, January 8, 1996
  194. S. Raghuraman, E. Lara-Curzio and M. K. Ferber, "Modeling of Flexural Behavior of CFCCs using Finite Element Analysis," *Presented at the 20th Annual*

- Conference on Composites and Advanced Ceramics*, Cocoa Beach, Florida January 8 (1996).
195. W. Lee, E. Lara-Curzio, K. More, Y. W. Bae, D. P. Stinton, L. Kupp and T. M. Besmann, "Processing and Characterization of CVD Oxide Interface Materials," *Presented at the 20th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, Florida January 10 (1996).
  196. K. L. More, E. Lara-Curzio, H. T. Lin, P. F. Tortorelli, R. Shinavski and W. S. Steiffer, "Multilayered SiC Fiber Coatings in Nicalon™ Fiber-reinforced Ceramic Matrix Composites," *Presented at the 20th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, Florida January 8 (1996).
  197. E. Lara-Curzio, M. K. Ferber and M. G. Jenkins, "Shear Strength of 2-D CFCCs," Poster Presentation at CFCC Program Review Meeting, Chicago, IL September 1995.
  198. E. Lara-Curzio and M. K. Ferber, "Some Considerations for Modeling the Creep Behavior of Composites," *Presented at the 18th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, Florida, January 11 (1994).
  199. E. Lara-Curzio, M. K. Ferber and R. A. Lowden, "The Effect of Coating Thickness on the Fiber-Matrix Interfacial Properties of CFCCs," *Presented at the 18th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, Florida, January 11 (1994).
  200. E. Lara-Curzio, M. K. Ferber, A. A. Wereszczak, L. Riester and R. A. Lowden, "Evaluation and Modeling of the Interfacial Behavior of CFCCs," Presented at the *International Symposium in Metal and Ceramic Composites*, TMS, 123rd Annual Meeting and Exhibition, San Francisco, CA February 27-March 3 (1994)
  201. E. Lara-Curzio, M. K. Ferber, A. A. Wereszczak, and R. A. Lowden, "Development and Application of an Interfacial Test System for the Measurement of Interfacial Properties in Fiber-Reinforced Ceramic Composites," *Presented at the International Symposium in Metal and Ceramic Composites*, TMS 123rd Annual Meeting and Exhibition, San Francisco, CA February 27-March 3 (1994)
  202. E. Lara-Curzio, M. K. Ferber, C-H Hsueh, A. A. Wereszczak, and R. A. Lowden, "Application of an Interfacial Test System to the Measurement of Interfacial Properties in Fiber-Reinforced Ceramic Composites," Presented at the *39th. International SAMPE Symposium and Conference*, Society for the Advancement of Material Process and Engineering, Anaheim CA, April 13 (1994)
  203. E. Lara-Curzio, M. K. Ferber and M. G. Jenkins, "Methodologies for the Thermomechanical Characterization of Continuous Fiber-Reinforced Ceramic Matrix Composites: A Review of Test Methods," *Presented at the 39th. International SAMPE Symposium and Conference*, Society for the Advancement of Material Process and Engineering, Anaheim CA, April 13 (1994)
  204. K. L. More, E. Lara-Curzio and R. A. Lowden, "Characterization of the Surface Roughness of a Variety of Ceramic Fibers Using High Resolution SEM and Atomic Force Microscopy," Presented at the *Symposium on Emerging Characterization*

- Techniques*, 96th Annual Meeting of the American Ceramic Society, Indianapolis, Indiana, April 23-24 (1994)
205. P. F. Tortorelli, E. Lara-Curzio, L. Riester, and M. K. Ferber, "The Use of Indentation Tests To Examine Oxidation Effects on Fiber-Reinforced SiC Composites," Presented at *96th Annual Meeting of the American Ceramic Society*, Indianapolis, Indiana, April 23-24 (1994)
  206. K. K. Chawla, Z. R. Xu, J. S. Ha, E. Lara-Curzio, M. K. Ferber and S. Russ, "Interfacial Characteristics in Mullite Fiber/BN Coating/ Mullite Matrix Composites," Presented at *96th Annual Meeting of the American Ceramic Society*, Indianapolis, Indiana, April 23-24 (1994)
  207. E. Lara-Curzio "Development of Standard Test Methods for the Mechanical Evaluation of CFCC", Presented at the DOD-DOE-NASA joint meeting on CFCCs, Oak Ridge National Laboratory, Oak Ridge, TN, May 25 (1994)
  208. E. Lara-Curzio, "Methodology for the Interfacial Characterization of CFCCs," Presented at the *First Workshop on Thermal and Mechanical Test Methods and Behavior of CFCCs*, American Society for Testing of Materials, Montreal Canada, June 22 (1994)
  209. E. Lara-Curzio, "Interfacial Characterization of CFCCs," Presented at the *Workshop on Radiation Resistant Ceramic Matrix Composites*, Rensselaer Polytechnic Institute, Troy NY, July 12 (1994)
  210. S. T. Gonczy, E. Lara-Curzio, L. Riester, E. P. Butler, S. C. Danforth and W. R. Cannon, "Low-Cost Machining of Ceramic-Fiber Reinforced Ceramic Composites (2-D) and the Effects on Tensile Properties," Presented at the *Symposium on Processing, Design and Performance of Composite Materials*, 1994 Winter Annual Meeting of the American Society of Mechanical Engineers, Chicago, Illinois November 6-11 (1994).
  211. M. K. Ferber, E. Lara-Curzio, S. Russ and K. K. Chawla, "Single-fiber Push-in vs. Single-fiber Push-out: A Comparison Between Two Test Methods to Determine the Interfacial Properties of Brittle Matrix Composites," Presented at the *Symposium on Ceramic Matrix Composites and Advanced Structural Materials*, The Materials Research Society, Boston, Massachusetts, November 28-December 2 (1994).
  212. E. Lara-Curzio and M. K. Ferber, "Evaluation of Interfacial Properties of CFCCs by Means of Single-Fiber Push-out and Push-Back Tests," Presented at the *Symposium on Ceramic Matrix Composites and Advanced Structural Materials*, The Materials Research Society, Boston, Massachusetts, November 28-December 2 (1994).
  213. E. Lara-Curzio, M. K. Ferber, F. Rebillat and J. Lamon, "Modification of Interfaces in SiC/SiC Composites," Presented at the *Symposium on Ceramic Matrix Composites and Advanced Structural Materials*, The Materials Research Society, Boston, Massachusetts, November 28-December 2 (1994).
  214. E. Lara-Curzio and M. K. Ferber, "Evolution of Internal Stresses in Composite Materials During Creep," Presented at the *Symposium on Ceramic Matrix*

- Composites and Advanced Structural Materials*, The Materials Research Society, Boston, Massachusetts, November 28-December 2 (1994).
215. S. Raghuraman, J. F. Stubbins, M. K. Ferber, E. Lara-Curzio and P. F. Tortorelli, "Oxidation Effects on Fiber/Matrix Interfaces in SiC/SiC Composites," Presented at the *Symposium on Ceramic Matrix Composites and Advanced Structural Materials*, The Materials Research Society, Boston, Massachusetts, November 28-December 2 (1994).
  216. S. Shanmugham, P. Liaw, D. P. Stinton, O. J. Shwartz, K. L. More, E. Lara-Curzio, P. Bleier and T. M. Besmann, "Development of Oxidation Resistant Interfacial Coatings for Nicalon™/SiC Composites," Presented at the *19th Annual Cocoa Beach Conference & Exposition*, Cocoa Beach, Florida, January 8-12 (1995)
  217. A. A. Wereszczak, M. K. Ferber, T. P. Kirkland and E. Lara-Curzio, "Stress Relaxation of Silicon Nitride at Elevated Temperatures," Presented at the *19th Annual Cocoa Beach Conference & Exposition*, Cocoa Beach, Florida, January 8-12 (1995)
  218. E. Lara-Curzio, M. K. Ferber, R. Boisvert and A. Szweda, "The High Temperature Tensile Fatigue Behavior of Polymer-derived Ceramic Composites," Presented at the *19th Annual Cocoa Beach Conference & Exposition*, Cocoa Beach, Florida, January 8-12 (1995)
  219. E. Lara-Curzio, M. K. Ferber, T. M. Besmann, F. Rebillat and J. Lamon, "Fiber-Matrix Bond Strength, Fiber Frictional Sliding and the Macroscopic Tensile Behavior of a 2D SiC/SiC Composite with Tailored Interfaces," Presented at the *19th Annual Cocoa Beach Conference & Exposition*, Cocoa Beach, Florida, January 8-12 (1995)
  220. S. Raghuraman, J. F. Stubbins, M. K. Ferber, E. Lara-Curzio and P. F. Tortorelli, "Effect of Temperature, Stress Oxidation and Loading Mode on R-Curve and Crack Growth in SiC/SiC " Presented at the *97th Annual Meeting of the American Ceramic Society*, Cincinnati, OH, April 30-May 3 (1995)
  221. D. Stinespring, D. F. Collazos, R. K. Gupta, E. Lara-Curzio and D. B. Braski, "Mechanical Properties and Oxidation Resistance of Silicon Nitride Coated Silicon Carbide Fibers," Presented at the *97th Annual Meeting of the American Ceramic Society*, Cincinnati, OH, April 30-May 3 (1995)
  222. C. L. Arnold, K. L. More and E. Lara-Curzio, "Characterization of Modified Ceramic Fiber Surfaces Using AFM," Presented at the 53rd Annual Meeting of the Microscopy Society of America, Kansas City, MO August 14-17 (1995)
  223. C. L. Arnold, K. L. More and E. Lara-Curzio, "Characterization of Modified Ceramic Fiber Surfaces Using AFM and Push-out Tests," Presented at the 29th Annual Conference of the Microbeam Analysis Society, Breckenridge, CO. August 7-10 (1995)
  224. K. L. More, R. A. Lowden and E. Lara-Curzio, "Characterization of the Surface Roughness of a Variety of Ceramic Fibers Using High Resolution SEM and Atomic

- Force Microscopy,” Presented at the 96th Annual Meeting of the American Ceramic Society, Indianapolis IN, April 24-28 (1994)
225. K. L. More, E. Lara-Curzio and R. A. Lowden, “The Effect of Fiber Surface Roughness on the Interfacial Properties of SiC Matrix Composites,” Presented at the 18th Annual Conference on Composites and Advanced Ceramic Materials, Cocoa Beach, FL January 9-14 (1994)
226. K. L. More, E. Lara-Curzio and R. A. Lowden, “Surface Roughness Characterization of Various Ceramic Fibers Using AFM and Low Voltage SEM,” Presented at the 52nd Annual Meeting of the Microscopy Society of America, New Orleans, LA July 31-August 5 (1994)

## Other Relevant Publications

1. R. A. Lowden, E. Lara-Curzio, M. K. Ferber, G. Hsueh, and A. Wereszczak, pp. 26-29, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for February-March, 1993*
2. E. Lara-Curzio, and M. G. Jenkins, pp. 30-38, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for February-March, 1993*
3. C. H. Hsueh, E. Lara-Curzio, R. A. Lowden, M. K. Ferber, pp. 27-32, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for April-May, 1993*
4. E. Lara-Curzio, and M. G. Jenkins, pp. 33-36, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for April-May, 1993*
5. R. A. Lowden, M. K. Ferber, E. Lara-Curzio, G. Hsueh and K. L. More, pp. 28-30, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for August-September, 1993*
6. E. Lara-Curzio, and M. G. Jenkins, pp. 35-40, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for August-September, 1993*
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8. E. Lara-Curzio, and M. G. Jenkins, pp. 44-49, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for October-November, 1993*
9. E. Lara-Curzio, M. K. Ferber, K. L. More, G. Hsueh, and R. A. Lowden, , pp. 33-42, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for December-January, 1994*
10. E. Lara-Curzio, and M. G. Jenkins, pp. 51-58, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for December-January, 1994*
11. E. Lara-Curzio, M. K. Ferber, K. L. More, G. Hsueh, and R. A. Lowden, , pp. 14-15, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for February-March, 1994*

12. E. Lara-Curzio, and M. G. Jenkins, pp. 21-25, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for February-March, 1994*
13. E. Lara-Curzio, M. K. Ferber, K. L. More, G. Hsueh, and R. A. Lowden, , pp. 17-23, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for April-May, 1994*
14. E. Lara-Curzio, and M. G. Jenkins, pp. 31-39, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for April-May, 1994*
15. E. Lara-Curzio, M. K. Ferber, K. L. More, G. Hsueh, and R. A. Lowden, , pp. 19-27, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for June-July, 1994*
16. M. G. Jenkins and E. Lara-Curzio, pp. 33-36, in M. H. Rawlins, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for June-July, 1994*
17. M. G. Jenkins and E. Lara-Curzio, pp. 29-34, in M. H. Harris, R. A. Lowden and M. A. Karnitz (compilers) *Continuous Fiber Ceramic Composites Program, Task 2 Bimonthly Progress Report for August-September, 1994*
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