TEXAS STATE VITA

I. Academic/Professional Background

A. **Name:** Luis Trueba **Title:** Assistant Professor

B. Educational Background

Degree	Year	University	Major	Thesis/Dissertation
Ph.D.	2003	Missouri University of Science and Technology	Metallurgical Engineering	Nozzle Clogging During the Continuous Casting of Aluminum-Killed Steel
B.S.	1993	The University of Texas at El Paso	Metallurgical Engineering	

C. University Experience

Position	University	Dates
Assistant Professor	Texas State University	8/2019 to present
Associate Professor	University of Texas Permian Basin	8/2017 to 8/2019
Assistant Professor	University of Texas Permian Basin	8/2011 to 8/2017
Assistant Professor	The University of Texas at El Paso	6/2005 to 8/2011
Associate Professor	Trine University	5/2005 to 6/2005
Assistant Professor	Trine University	8/2001 to 5/2005

D. Relevant Professional Experience

Position	Entity	Dates
Research Engineer	Vallourec Research Center, Aulnoye-Aymeries, France	6/2009 to 8/2009
Process Engineer & Shift Supervisor	Reynolds Metals Company, Lake Charles, Louisiana	2/1996 to 8/1998
Manufacturing Technologist	Applied Materials, Inc., Austin, Texas	1/1994 to 1/1996
Student Engineer	El Paso Natural Gas, El Paso, Texas	3/1992 to 1/1994
Metallurgical Co-op	The Aluminum Company of America, Rockdale, Texas	5/1991 to 1/1992

E. Other Professional Credentials (licensure, certification, etc.)

- Engineer in Training, Louisiana, 1996

II. TEACHING

A. Teaching Honors and Awards:

- UTPB College of Engineering Excellence in Teaching Award, 2018
- The National Society of Leadership and Success Excellence in Teaching Award, 2016
- The National Society of Leadership and Success Excellence in Teaching Award, 2013
- Frank and Julia Gelet McKetta Excellence in Teaching Award in Engineering, 2003
- Tri-State University Senior Class Teaching Award, 2004
- Tri-State University Senior Class Teaching Award, 2003
- Foundry Educational Foundation's Ray Witt Award 2002

B. Courses Taught:

Texas State University

TECH 4330 Foundry and Heat Treatment

University of Texas Permian Basin

BENG 3373 Engineering Probability and Statistics
ENGR 2301 Engineering Mechanics: Statics
ENGR 3303 Introduction to Materials Science
ENGR 3375 Introduction to Thermodynamics
ENGR 4195 Professional Practice
MENG 3324 Manufacturing Processes
NENG 3301 Introduction to Nuclear Power Systems
NENG 4211 Nuclear Engineering Lab
NENG 4311 Radioactive Materials Processing and Waste Management
NENG 4331 Radiation and Radiation Protection
NENG 4321 Nuclear Reactor Engineering

The University of Texas at El Paso

BE 2303 Introduction to Materials Science and Engineering
BE 2434 Mechanics I: Statics and Mechanics of Materials
MME 2305 Material and Energy Balances
MME 3306 Rate Processes
MME 3308 Applied Chemical Thermodynamics
MME 4195 Senior Professional Orientation
MME 4371 Advanced Failure Analysis
MME 4371 Iron and Steel Production

Trine University

ES 233 Engineering Materials
MAE 102 Introduction to Mechanical Engineering

MAE 343 Manufacturing Processes and Equipment
MAE 383 Metallurgical Thermodynamics
MAE 393 Metallurgical Transport Processes
MAE 4193 Metal Casting
MAE 443 Engineering Metallurgy

C. Directed Student Learning (i.e. theses, dissertations, exit committees, etc.):

- Graduate Students Advised:
  - Georgina Heredia
    M.S. Thesis, Fall 2013
    Influence of Tool Shoulder Geometry on Friction Stir Welding of Aluminum 6061

  - Monica Torres
    M.S. Thesis, Spring 2011
    Effect of Welding Parameters on Weld Quality of Self-Reacting Friction Stir Welds

  - Shravan Kumar
    M.S. Project, Fall 2010
    Effect of Catalyst on Formation and Growth of Carbon Nanotubes By Spray Pyrolysis

  - Christopher Bradley
    M.S. Thesis, 2009
    Microstructural Characterization and Heat Treatment of A-286 Turbine Airfoils

  - Jose Lopez
    M.S. Project, 2008
    Silicon Oxidation Processes

  - Jiajia Xiao
    M.S. Thesis, 2007
    Study of Factors Affecting the Synthesis of Carbon Nanotubes by Spray Pyrolysis

D. Courses Prepared and Curriculum Development:

- Courses Prepared
  TECH 4330 Foundry and Heat Treatment
  BENG 3373 Engineering Probability and Statistics
  ENGR 2301 Engineering Mechanics: Statics
  ENGR 3303 Introduction to Materials Science
  ENGR 3375 Introduction to Thermodynamics
  ENGR 4195 Professional Practice
  MENG 3324 Manufacturing Processes
  NENG 3301 Introduction to Nuclear Power Systems
  NENG 4211 Nuclear Engineering Lab
  NENG 4311 Radioactive Materials Processing and Waste Management
  NENG 4331 Radiation and Radiation Protection

BE 2303 Introduction to Materials Science and Engineering
BE 2434 Mechanics I: Statics and Mechanics of Materials
MME 2305 Material and Energy Balances
MME 3306 Rate Processes
MME 3308 Applied Chemical Thermodynamics
MME 4195 Senior Professional Orientation
MME 4371 Advanced Failure Analysis
NENG 4321 Nuclear Reactor Engineering
ES 233 Engineering Materials
MAE 102 Introduction to Mechanical Engineering
MAE 343 Manufacturing Processes and Equipment
MAE 383 Metallurgical Thermodynamics
MAE 393 Metallurgical Transport Processes
MAE 4193 Metal Casting
MAE 443 Engineering Metallurgy

Courses Developed
MME 4371 Iron and Steel Production

E. Teaching Grants and Contracts

1. Funded External Teaching Grants and Contracts:
   None

2. Submitted, but not Funded, External Teaching Grants and Contracts:
   None

3. Funded Internal Teaching Grants and Contracts:
   None

4. Submitted, but not Funded, Internal Teaching Grants and Contracts:
   None

F. Other:
None

G. Teaching Professional Development Activities Attended

- Engineering Inclusive Classrooms: Guiding Principles and Strategies
  ASEE Webinar, March 20 and April 10, 2019

- Teaching Metacognition to Help Students Own and Improve Their Learning
  ASEE Webinar, Feb. 6 & 20, 2019

- UNCF SPIA Project Management Course
  January 2011

III. SCHOLARLY/CREATIVE

A. Works in Print (including works accepted, forthcoming, in press):

1. Books:

a. Scholarly Monographs:
None

b. Textbooks:
None

c. Edited Books:
None

d. Chapters in Books:
None

e. Creative Books:
None

2. Articles:

a. Refereed Journal Articles:

Trueba Jr. L; Torres, M.A.; Johannes, L.B.; Rybicki, D.; "Process Optimization in the Self-Reacting Friction Stir Welding of Aluminum 6061-T6," *International Journal of Material Forming*, vol. 11, no. 4, 2018, pp. 559 - 570. https://doi.org/10.1007/s12289-017-1365-4

Trueba Jr., L.; Heredia, G.; Rybicki, D.; Johannes, L.B.; "Effect of Tool Shoulder Features on Defects and Tensile Properties of Friction Stir Welded Aluminum," *Journal of Materials Processing Technology*, vol. 219, 2015, pp. 271-277.

Stafford, S.W.; Trueba Jr., L. "Fatigue Cracking of a 3-MW Electric Motor Shaft," *The Journal of Failure Analysis and Prevention*, vol. 15, no. 2, 2015, pp. 211-218.

Trueba Jr., L.; Peaslee, K.D.; Smith, J.D. "Simulation of Nozzle Clogging During the Continuous Casting of Aluminum-Killed Steel," *AIST Transactions*, Association for Iron and Steel Technology, Feb. 2006, pp. 123-133.

Trueba Jr., L; Peaslee, K.D.; Smith, J.D.; Karakus, M. "Effect of Nozzle Base Material on the Rate of Clogging During the Continuous Casting of Aluminum-Killed Steels," *Steel Research International*, vol. 77, no. 1, 2006, pp. 37-47.

Tuttle, R.B.; Peaslee, K.D.; Richards, V.L.; Trueba Jr., L. "The Effect of Ferrous Charge Materials and Covered Melting on Metallic and Alloy recovery in Iron Melts," *Transactions of the American Foundry Society*, The American Foundry Society, 2003, pp. 1101-1112.

b. Non-refereed Articles:
None

3. Conference Proceedings:

a. Refereed Conference Proceedings:
None

b. Non-refereed:

Trueba Jr., L.; Schmidt, E.; Corbari, R.; Kan, M. "Thermodynamic Modeling to Improve Foamy Slag Practice in the EAF," *AISTech 2010 Proceedings: Vol. I*, Association for Iron and Steel Technology, 2010, pp. 859-873.

Trueba Jr., L.; Peaslee, K.D.; Smith, J.D. "Simulation of Nozzle Clogging During the Continuous Casting of Aluminum-Killed Steel," *84th Steelmaking Conference Proceedings*, Iron and Steel Society/AIME, 2001, pp. 913-924.

Smith, J.D.; Karakus, M.; Peaslee, K.D.; Trueba, L.: "Study of Continuous Casting Nozzle Clogging Using Cathodoluminescence Microscopy," *Advances in Refractories for the Metallurgical Industries III*, Canadian Institute of Mining, Metallurgy and Petroleum, 1999, pp. 187-200.

4. Abstracts:
None

5. Reports:
None

6. Book Reviews:
None

7. Essays:
None

8. Poems:
None

9. Short Stories:
None

10. Other Works in Print:
None

B. Works Not in Print:

1. Papers Presented at Professional Meetings:

Trueba Jr., L. "Project-Based Learning in Materials Science", presented at the 2011 U.S. Materials Education Symposium, March 24-25, 2011, Worcester, MA.

Camacho, N.; Trueba Jr., L.; Stafford, S. W., "Progressive Wear Damage Analysis on Retrieved UHMWPE Tibial Implants", 26th Southern Biomedical Engineering Conference, May 2010, Baltimore, MD.

Camacho,N.; Trueba Jr., L.; Stafford, S. W. "Computational Wear Damage Analysis on Retrieved Tibial Components," 25th Southern Biomedical Engineering Conference, May 2009, Miami, FL.

Trueba Jr., L. and Kephart, K. L. "Stretching Minds: Rubber Bands in Active Learning," presented at the Sun Conference, February 27, 2009, El Paso, TX.

2. Invited Talks, Lectures, and Presentations:
None

3. Consultancies:
None

4. Workshops:
None

5. Other Works not in Print:

a. Works "submitted" or "under review":
None

b. Works "in progress":
None

c. Other Works Not in Print:
None

C. Scholarly / Creative Grants and Contracts:

1. Funded External Grants and Contracts:

Scholarships for the Recruitment and Retention of Nuclear Engineering Track Students
Funding Source: U.S. Nuclear Regulatory Commission
Amount: $200,000
Period: 8/19-8/21

Integrated Research and Education Developmental Activities for the Mechanical Engineering-Nuclear Track Students and Faculty at UTPB
Funding Source: U.S. Nuclear Regulatory Commission
Amount: $169,506
Period: 9/15-8/18

Fuel Management Optimization in a Pressurized Water Reactor
Funding Source: Louis Stokes Alliance for Minority Participation
Amount: $3,750
Period: 6/14 to 8/14

Materials Processing and Performance Lab
Funding Source: United States Steel Foundation
Amount: $500,000
Period: 9/08 to 9/13

ExciTES Leadership Engineering
Funding Source: Texas Higher Education Coordinating Board
Amount: $20,000
Period: 5/11 to 8/11

Spira Footwear Wave Spring Testing
Funding Source: Spira Footwear
Amount: $25,000
Period: 4/09 to 8/09

Thermodynamic Modeling for Robust Slag Foaming in the EAF
Funding Source: V & M Star
Amount: $45,000
Period: 6/09 to 8/09

Shoulder Design for Friction Stir Welding
Funding Source: National Aeronautics and Space Administration
Amount: $6,789
Period: 7/08 to 8/08

Jacobs Technical Services and Support Contract
Funding Source: Jacobs ESCG
Amount: $300,000
Period: 2/07 to 2/10

Metallic Recovery and Ferrous Melting Processes
Funding Source: U.S. Department of Energy
Amount: $200,000
Period: 10/01 to 10/03

2. Submitted, but not Funded, External Grants and Contracts:
None

3. Funded Internal Grants and Contracts:
None

4. Submitted, but not Funded, Internal Grants and Contracts:
None

D. Scholarly / Creative Fellowships, Awards, Honors:
None

E. Scholarly / Creative Professional Development Activities Attended:
None

F. Media Recognition:
None

IV. SERVICE

A. Institutional

1. University:

University of Texas Permian Basin
- Member, SACSCOC Compliance Education Policy Subcommittee, 2018
- Senator, Faculty Senate, 2014 to 2018
- UTPB Critical Thinking Assessment Test (CAT) Grader, 5/13

The University of Texas at El Paso
- Chair, Calendar and Catalog Committee of the Faculty Senate, 3/06 to 9/09

Trine University
- Faculty President, 2004-2005

2. College:

University of Texas Permian Basin

- Director, UT Permian Basin and XTO Energy Engineering Summer Program, 2019
- Chair, College of Engineering Strategic Development Committee, 2018 to 2019
- Chair, College of Engineering Curriculum Affairs Committee, 2017 to 2019
- College of Business and Engineering Scholarship Committee, 2/12 to 8/17
- FE Review Course Instructor, Spring 2013 to 2016
- Founder and Link Director, Falcon Link of The Order of the Engineer – 5/13 to 8/19

The University of Texas at El Paso

- College of Engineering Faculty Advisory Committee, 12/05 to 3/06
- College of Engineering Key Strategic Direction 1 Committee, 12/05 to 5/06
- College of Engineering Systems Engineering Committee, 12/05 to 9/06

3. Department/School:

Texas State University

- Foundry Educational Foundation Key Professor (8/19 to present)

University of Texas Permian Basin

- Faculty Advisor to ANS Student Chapter, 2013 to 2019
- Undergraduate Academic Advisor (approx. 30 students/semester), 2012 to 2019

The University of Texas at El Paso

- MME Outreach Coordinator Supervisor, 9/06 to 7/11
- Undergraduate Academic Advisor (approx. 40 students/semester), 2005 to 2011
- Faculty Advisor to American Foundry Society Student Chapter, 1/06 to 8/11

Trine University

- Foundry Educational Foundation Key Professor – 8/01 to 5/05
- Faculty Advisor to TSU Materials Society – 8/01 to 5/05

B. Professional:

- Chair, ASM International Fort Wayne Chapter – 2003 to 2004
- Vice-chair, ASM International Fort Wayne Chapter – 2002 to 2003

C. Community:

- Chair, Scientific Review Committee, Permian Basin Regional Science Fair, 2016
- Member, Scientific Review Committee, Permian Basin Regional Science Fair, 2014 to 2016
- Boy Scouts Merit Badge Academy, Nuclear Science Badge Facilitator – 2014 to 2018
- Judge, Permian Basin Regional Science Fair – 2013 to 2016
- Judge, Ector County Independent School District Robotics Tournament – 11/11

D. Organization Memberships:

- Member, American Society for Engineering Education
- Member, American Foundry Society

E. Service Honors and Awards:

- UTPB College of Business and Engineering Excellence is Service Award, 2014

F. Service Grants and Contracts:

1. Funded External Service Grants and Contracts:
   None

2. Submitted, but not Funded, External Service Grants and Contracts:
   None

3. Funded Internal Service Grants and Contracts:
   None

4. Submitted, but not Funded, Internal Service Grants and Contracts:
   None

G. Service Professional Development Activities Attended:
None