## Erik Sander Executive Director, University of Florida Engineering Innovation Institute

Erik Sander's career spans a broad range of professional experiences – from working as an engineer in NASA's labs and Fortune 500 companies, to starting and growing technology companies, working in the private venture industry, and managing the cutting edge research and innovation of academia.

Erik began his career as a Project Manager and Senior Engineer analyzing advanced fighter aircraft engines and the NASA Space Shuttle Main Engine for Lockheed Martin, General Electric, and Pratt & Whitney. He was also a Technology Transfer Officer for Lockheed Martin at the NASA Marshall Space Flight Center.

Erik was a Principal for Cenetec Ventures, a private technology incubator and early stage venture fund and along the way he grew several start-up companies in areas ranging from real estate development to technology deployment. Erik also co-founded V2R Group, a technology commercialization company that provided funding and executive level direction to growing high technology companies in markets from internet security to medical device development.

Starting in 1995, Erik joined the faculty of the University of Florida College of Engineering as Director of the University Center, Associate Director for the Engineering Research Center, and founding Director of Industry Programs - all directed at fostering industrial collaboration, entrepreneurship, technology commercialization, and innovation across a \$100M+ research base. Erik served as the founding Director of the UF Florida High Tech Corridor Council Matching Funds Research Program, Associate Director for the State of Florida Energy Systems Consortium, Associate Director for the UF Center of Excellence for Nano-Bio Sensors, Director of the UF Research and Engineering Education Facility, and the Co-PI for the UF Center for Innovative Brain-Machine Interfaces.

In 2015, Erik was named Founding Executive Director of the Florida Engineering Experiment Station (FLEX) at the University of Florida. FLEX established a state-wide network of engineering extension operations in order to provide direct assistance in industry engagement, workforce development, distance education, access to UF resources and facilities, accessing entrepreneurial talent and startup companies, K-12 Outreach, and other UF resources.

Erik currently serves as the founder and the Michael Durham Executive Director of the University of Florida Engineering Innovation Institute, which fosters a culture of innovation leadership within the UF College of Engineering and beyond. The Institute is the nexus of leading edge curricular and experiential programs focused on creating student leaders in innovation positioned to change the world, driving faculty programs focused on leading edge research and innovation, connecting innovators, entrepreneurs, and investors with UF, and transitioning the research and technologies of the College of Engineering to the private sector.

Erik received his Bachelor of Science in Mechanical Engineering from the University of Florida and Master of Science in Management of Technology (Cum Laude) from the University of Alabama in Huntsville. He's served on the boards of a number of public and private organizations and has given invited presentations at over 100 conferences internationally.

## Erik Sander Founding Executive Director, University of Florida Engineering Innovation Institute

# **EXPERIENCE**

## Founder and The Michael Durham Executive Director

## University of Florida Engineering Innovation Institute, Gainesville, FL; 2011 - Present

Direct the University of Florida Engineering Innovation Institute to foster a culture of innovation among faculty, students and staff of the University of Florida College of Engineering. The Institute serves as the nexus of engineering innovation education, research and experiential programs extending across the spectrum of creative discovery and invention to the transition of UF engineering technologies and innovative students to the marketplace. The Institute produces leaders with engineering and innovation skills to attack the world's most daunting problems and change the world.

## Founder and Executive Director

## Florida Engineering Experiment Station, University of Florida, Gainesville, FL; 2015 – 2022

Direct all staff and activities of the Florida Engineering Experiment Station (FLEX) at the University of Florida to provide service to serve Florida industry and citizens. FLEX comprises a state-wide network of engineering extension operations to provide direct assistance in workforce and professional development, distance education, access to UF resources and facilities, entrepreneurial talent and spinoff companies, and other UF resources. Additionally, FLEX oversees the College of Engineering's Industrial Engagement and K-12 Outreach programs.

#### Director

## UF Research and Engineering Education Facility (REEF), Shalamar, FL; 2020-2022

Direct operational, research engineering education, and outreach activities of the UF Research and Engineering Education Facility, located adjacent to Eglin Air Force Base in Shalimar, Florida. REEF grows partnerships with the private, academic, and public sectors in Northwest Florida, with a focus on growing the region's innovation economy. The 45,000 sf REEF facility includes cutting edge laboratory facilities, faculty and staff in technical fields to support the mission of the Air Force Research Lab (e.g., hypersonic materials and ballistics, autonomous systems, adaptive control for aerodynamic systems, solid mechanics, data science). REEF also offers curricula that lead to Masters and Doctorate degree programs in Mechanical Engineering, Aerospace Engineering, Electrical and Computer Engineering and Industrial Systems Engineering.

## Founder and Chief Executive Officer

## Elysium Holdings LLC, Gainesville, FL; 2005 – Present

Provide consulting services to a number of public and private sector clients in the areas of high technology business formation and growth, university-industry collaborations, technology commercialization, venture investments, intellectual property management, international business development, marketing, and sales, and university and federal lab R&D management and technology commercialization. Blue ribbon client base includes the National Science Foundation, multiple universities world-wide, and leading high-tech companies.

## **Co-founder and Interim Director**

University of Florida Engineering Leadership Institute, Gainesville, FL; 2011 - 2013

Direct the University of Florida Engineering Leadership Institute, focused on creating leaders for a new world where technology plays a major role and the need for principle based, character focused leaders is now more than ever demanded by our country and the world. The Institute is designed to change the view of and by engineers about their role as leaders in modern society by providing the experience, the educational framework, and the expectation within students, faculty, and the profession that engineers are to be leaders, with a strong focus on integrity and character.

## **Founder and Director**

## Office of Industry Programs, UF College of Engineering, Gainesville, FL; 2000 - 2011

Direct industrial programs for the University of Florida College of Engineering (\$70M+ annual research budget) including building industrial research and education collaborations, developing industrial contracts, increasing technology commercialization, accelerating start-up company spin-off activities, and building an entrepreneurial culture and education programs. Additionally, direct the Florida High Tech Corridor Council matching grants research program which provides for seed stage funding of cutting edge university-industry-entrepreneur collaborative R&D leading to technology commercialization. Also serve as Associate Director of the Florida Energy Systems Consortium, Associate Director of the Center of Excellence for Nano-Bio Sensors, and Co-Principal Investigator of the Center for Innovative Brain-Machine Interfaces.

## **Co-Founder**

#### V2R Group, Inc., Orlando, FL; 2005 - 2009

Provide experience-based, C-level guidance and funding to growing high-tech companies in markets from productivity enhancements and automation to medical device development. Provide guidance and counsel on myriad business issues such as global market expansion, revenue generation, accessing capital markets, venture capital fundraising, maximizing margins, developing infrastructure, acquisitions and mergers, and building sales and marketing programs. V2R Group's business model was to commercialize cutting edge university R&D by founding and investing in spin-out companies and provide the business management and infrastructure to drive substantial and early market penetration.

#### **Co-Founder**

#### Diversified Mobility, Inc.; Melbourne, FL; 1999 - 2009

Direct the design, engineering, development, and market penetration of patented mobilized powerlift platforms for various applications including food service and heavy equipment mobilization. Brought the company from start-up through current profitable operations serving a number of markets. Key responsibilities have included all aspects of company growth including technology development, engineering, manufacturing, operations, fund-raising, management recruiting, building strategic alliances, and marketing.

## Associate Director for Industrial Collaboration and Technology Transfer

#### University of Florida Engineering Research Center, Gainesville, FL; 1997 - 2004

Directed all industrial collaboration and technology transfer activities for the University of Florida Engineering Research Center for Particle Science and Technology. The Center operated with a \$6M annual budget, an industrial membership program of 50+ industrial partners (primarily Fortune 500 and large multi-national corporations) from 25+ industries, and an industrial sponsored research budget of \$3M+. Activities included guiding contract negotiations, intellectual property management, technology

transfer, marketing, business development, and all other activities related to industrial collaboration and technology transfer.

## **Director of Business Development and Principal**

#### Cenetec Ventures, L.L.C., Gainesville, FL; 2001 – 2002

Directed business development programs for Cenetec Ventures Gainesville technology incubator and venture fund including identification of high potential companies for incubation and funding, identification of critical assets and needs, early stage management, etc.

#### Director

#### University of Florida University Center, Gainesville, FL; 1995 – 1998

Directed the University of Florida University Center in promoting university/industry collaborations and the flow of university technologies to industry for commercialization. The University Center focused on technology based economic development through activities which provided Florida incubators and private clients with assistance in commercializing technologies resident in Florida universities. These activities included identifying specific university technologies with high potential for commercialization by industry and providing assistance to potential technology development partners as well as matching client's needs with appropriate university technologies and expertise.

#### **Technology Transfer Officer**

#### Lockheed Martin Manned Space Systems, Huntsville, AL; 1994 - 1995

Responsible for technology transfer activities between the NASA / Marshall Space Flight Center, Lockheed Martin Manned Space Systems and private sector entities. Primary tasks included identification of industry technology needs and matching NASA and Lockheed Martin technical competencies and tools, marketing of these technologies through direct industry visits, and negotiation of agreements for joint technical ventures.

#### **Senior Engineer**

## Lockheed Martin Manned Space Systems, Huntsville, AL; 1990 - 1994; 1987 - 1989

Directed engineering team in development of NASA/Space Shuttle Main Engine. Primary tasks included management of personnel and information systems designed for optimal data acquisition, validation, databasing, networking, and analysis. Focus was placed on comprehensive analysis and computer modeling of multi-discipline data from Space Shuttle testing and flight.

#### **Co-founder and Senior Vice-President**

#### Royal Key Club, St. Joseph, MI; 1990

Responsible for financing, operations, marketing, and sales efforts for a start-up resort including coordination of potential business identification and tracking, funding and procurement, advertisement and promotion expenditures, pricing and positioning strategies, customer visits, and presentations to customers and owners concerning ongoing activities.

#### **Systems Engineer**

# General Electric Corp.; Pratt & Whitney Aircraft Corp., Cincinnati, OH; 1989 - 1990; WPB, FL; 1984 - 1987

Directed systems data analysis efforts for current and future families of combat aircraft engines. Primary responsibilities included direction of laboratory and field data analysis efforts; engine simulation models

design, data acquisition, processing, networking, and analysis; and documentation and presentation of results to senior management as well as technical customers.

## **EDUCATION**

Master of Science in Management of Technology, The University of Alabama in Huntsville, Summa Cum Laude, 1994

#### Bachelor of Science in Mechanical Engineering, The University of Florida, 1984 MEMBERSHIPS, ACTIVITIES, AND BOARDS IN THE PROFESSION

## Memberships in the Profession

- a. International and National
  - 1. Association of University Technology Managers (AUTM) Member (2001-present)
  - 2. UF Epsilon Lambda Chi Engineering Leadership Honor Society Honorary Member (2015present)
  - 3. Community of Practice for Leadership Education for Twenty-first-century Engineers (COMPLETE) Founding Member (2011-2014)
  - 4. Network of Academic Corporate Relations Officers (NACRO) Member (2012-2014)
  - 5. Startup Florida (Florida Affiliate of President Obama Initiative Startup America) –Steering Committee Charter Member (2011-2012)
  - 6. Consortium for Entrepreneurship Education (CEE) Charter Director (2004-2006)
  - 7. National Association of Management and Technical Assistance Centers (NAMTAC) Director (1995–1998)

#### b. State

- 1. Florida Technology Council (2021-present)
- 2. CyberFlorida State University System Cybersecurity Advisory Council (2018-present)
- 3. Florida FIRST Robotics Executive Advisory Board (2015-present)
- 4. Florida High Tech Corridor Council Core Team (2005-present)
- 5. Tampa Bay Tech Director (2008-2010, 2018-present)
- 6. Florida Research Consortium Charter Director; Executive Committee, Charter Education Committee Chair; Charter Talent Development Committee Chair (2003-2018)
- 7. Florida Chamber Foundation Innovation & Economic Development Caucus (2010-2015)
- 8. Florida Technology Transfer Conference Director; Charter Conference Chair (2004-2008)

## c. <u>Local</u>

- 1. Gainesville Area Innovation Network (GAIN) Trustee (1995-2000; 2017)
- 2. Innovation Gainesville Advocates Director (2012-2015); Co-chair (2013-2015)
- 3. North Central Florida Advanced Manufacturing Council Director (2014 2015)
- 4. Buchholz HS Academy of Entrepreneurship and Academy of Finance Advisory Board (2002-2014)
- 5. Gainesville Area Chamber of Commerce Director (2003-2013); Executive Committee (2003-2009); Innovation Policy Committee (2013-2014)
- 6. Gainesville Technology Enterprise Center Charter Director; Charter Chair (2001-2012)
- 7. Service Corp of Retired Executives (SCORE) Charter Director (2009-2010)

#### **Private Sector Board Positions**

- 1. Aventusoft, Inc. Charter Advisory Board Member (2014 present)
- 2. Seaworthy Collective Charter Advisory Board Member (2021-2022)
- 3. Red Lambda, Inc. Director (2006-2007); Director (2016 2019)
- 4. Eatable, Inc. Charter Advisory Board Member (2013-2014)
- 5. Feathr, Inc. Charter Advisory Board Member (2012-2013)
- 6. RoomSync, Inc. Charter Advisory Board Member (2009-2013)
- 7. Sinmat, Inc Advisory Board Member (2006-2009)
- 8. ICU Data Systems, Inc. Charter Director (2005-2009)
- 9. Clavina Diagnostics, Inc. Co-founder; Charter Director (2005-2009)
- 10. V2R Group, Inc. Co-founder, Charter Director (2005-2009)
- 11. Intelligenxia, Inc. Advisory Board Member (2004-2007)
- 12. Evolugate, LLC Co-founder (2006)
- 13. Speed Emissions, Inc. (OTCBB: SPMI) Director, Chair of Audit Committee (2005-2006)
- 14. Novoris, Inc. Charter Director (2004)
- 15. CPI, Inc. Co-founder; Charter Director (1995-2004)

#### University Governance and Service

- 1. UF Artificial Intelligence (AI) Outreach and Workforce Programs Committee Chair (2020present)
- 2. UF Institute of Food & Agricultural Sciences/Extension Advisory Committee (2017-present)
- 3. UF Provost Office Bridge to Employment Success Today Task Force (2016-present)
- 4. UF Alumni Association Outstanding Leader Awards Selection Committee (2014-present)
- 5. UF College of Liberal Arts and Sciences / Bob Graham Center for Public Service Campus Faculty Affiliate Charter Member (2013-present)
- 6. UF Innovation Academy Provost Task Force Charter Member (2011-2012); Curriculum Committee Charter Member (2011-present)
- 7. UF College of Business/Center for Entrepreneurship and Innovation Charter Director (2003present)
- 8. UF College of Engineering Executive Committee (2008-present)
- 9. UF College of Engineering/Integrated Product & Process Design Director (2000-present)
- 10. Southeastern Conference Symposium Organizing Committee and Advisory Board (2015)
- 11. UF College of Engineering Professional Development Leave Dean's Advisory Committee Charter Chair (2012-2014)
- 12. UF Innovative Sustainability & Social Impact Initiative Advisory Board (2011-2014)
- 13. UF Innovation through Institutional Integration Institute (I-Cubed) Charter Advisory Board Member (2010-2015)
- 14. UF College of Engineering Energy Strategic Planning Committee (2010-2012)
- 15. UF/UCF Space Research Institute Review Board (2008-2012)
- 16. UF OTL Annual Celebration of Innovation Applicant Reviewer and Mentor (2006-2010)
- 17. UF College of Law/International Center for Automated Information Research (ICAIR) Director (2004-2012)
- 18. UF College of Engineering Director of Industry Programs Search Committee Chair (2013)
- 19. UF Engineering Leadership Institute Director Search Committee Chair (2011-2012)
- 20. UF Entrepreneurs Club Charter Director (2004-2006)

## **Activities in the Profession**

- 1. 2021 National Science Foundation Engineering Research Center (NSF ERC) Stakeholder Steering Committee Member.
- 2. 2017 Southeastern Conference (SEC) Student Pitch Competition; The first to be held at an SEC University Competition Chair (2017)
- 3. University of South Florida CONNECT Mentor Council (2011-present)
- 4. Technological Institute of the Philippines, Invited Visiting Professor funded by USAID (2016)
- 5. 2015 Southeastern Conference (SEC) Symposium on Creativity, Innovation and Entrepreneurship Symposium Chair (2015)
- 6. Universidad de Campinas, Campinas, Brazil, Invited Visiting Professor (2014-2016)
- 7. Startup Brazil TECHmall Belo Horizonte Incubator, Mentor Network (2013-2014)
- 8. NSF Small Business Innovation Research (SBIR) proposal reviewer (2006-2009)
- 9. DOE SBIR/STTR proposal reviewer (2009)
- 10. Florida High Tech Corridor Matching Grants Research Program Review Committee Chair (2005 2012)
- 11. Florida Energy Systems Consortium commercialization awards review committee (2008-2011)
- 12. Florida Technology Transfer Conference Director; Charter Conference Chair (2004-2008)

## **PUBLICATIONS**

Refereed Journals, Books, and Chapters

- 1. <u>Sander, Erik, National Science Foundation Engineering Research Centers Program Best Practices</u> <u>Manual: Industrial Collaboration and Innovation</u>, 2<sup>nd</sup> Edition, www.erc-assoc.org, 2013.
- Ford, Bryan K., Kathleen J. Shino, Erik Sander, Michael W. Parker, "SBIR (Small Business Innovation Research) and STTR (Small Business Technology Transfer) Programs: The Private Sector, Public Sector and University Trifecta", Journal of Research Administration, Spring 2008 (Volume 39, No 1, p. 58-77).
- 3. Reviewer for four chapters of <u>Technology Ventures: From Idea to Enterprise</u>, 3<sup>rd</sup> Edition, Dorf, Richard, Byers, Thomas, and Nelson, Andrew; ISBN 978-0073380186, McGraw-Hill, 2010.

<u>Refereed Proceedings<sup>1</sup></u>

- 1. <u>Sander, Erik</u>, "Entrepreneurship Education-Learning by Doing", <u>Proceedings of the 2011</u> <u>American Society for Engineering Education (ASEE) Annual Meeting and Exposition</u>, 2011.
- Sander, Erik, "Comment on The Role of Higher Education in High-Technology Industrial Development: What Can International Experience Tell Us", <u>Proceedings of the World Bank</u> <u>Annual Bank Conference on Development Economics 2009, Global: People, Politics, and</u> <u>Globalization</u>, Cape Town, South Africa, 2010, p. 266-273. Invited.

<sup>&</sup>lt;sup>1</sup> All refereed proceedings listed were reviewed and vetted by experts in the field of university-industry collaborations, technology transfer and commercialization, and/or entrepreneurship/innovation education. The process is typically submission of a proposed paper abstract to the conference organizers, review by nationally recognized subject matter experts in the field as recruited by the conference organizers, invitation/rejection for a full paper submission, full paper draft submission, review and comments of the draft paper by subject matter experts, submission of the final paper, acceptance/rejection of the final paper by the panel of experts and conference organizers.

- 3. <u>Sander, Erik</u>, "Developing Value Through Synergistic University / Industry Collaborations", <u>Proceedings of the American Institute of Chemical Engineers (AIChE) Annual Conference</u>, Cincinnati, OH, 2005, p. 13006-13009.
- 4. <u>Sander, Erik</u>, "Integrating Technology Transfer and Entrepreneurial Programs in University-Industry Collaborations", <u>Proceedings of the Commercialization of Micro and Nano Systems</u> (COMS) Annual Conference, Baden-Baden, Germany, 2005, p. 111-114.
- <u>Stanfill, R. K.</u>, Sander, E. J., Rossi, W. J., Ingley, H. A., Whitney, E. D., Hoit, M. I., "Integrating Entrepreneurial Projects into a Successful Multidisciplinary Capstone Design Program at the University of Florida," <u>Proceedings of the American Society for Engineering Education 2004</u> <u>Annual Conference & Exposition</u>, Salt Lake City, Utah, June 20-23, 2004, 9 pp. (CD-ROM).
- <u>Stanfill, R. K.</u>, Sander, E. J., Rossi, W. J., Ingley, H. A., Whitney, E. D., Hoit, M. I., "The University of Florida Integrated Technology Ventures (ITV) Program," <u>Proceedings of the NCIIA</u> <u>8th Annual Meeting</u>, San Jose, CA, March 18-20, 2004, p. 93-98.

## Non-refereed Publications

- 1. <u>Sander, Erik</u>, "NSF Engineering Research Center Best Practices Manual Industrial Collaboration, Technology Commercialization, and Innovation", Study Report to the National Science Foundation, February 2012.
- 2. <u>Sander, Erik, Erik Arnold, Eoin O'Sullivan</u>, "Assessment of SFI Centres for Science, Engineering, and Technology Programme 2010", Report published by Science Foundation Ireland, June 2010.
- 3. <u>Sander, Erik</u>, B. Jack Sullivan, Aster Adams, "Energy Efficiency and Renewable Energy in Florida; Barriers to Commercialization and Project Finance", Report to the Florida Energy and Climate Commission and Energy Office of the Governor, Published March 2010.
- 4. <u>Lal, Bhavya</u>, Craig Boardman, Nate Deshmukh Towery, Jamie Link, and Stephanie Shipp, "Designing the Next Generation of NSF Engineering Research Centers: Insights from Worldwide Practice" (Study Subject Matter Expert and Reviewer), Published by US Science and Technology Policy Institute, November 2007.

# **LECTURES, SPEECHES, AND PRESENTATIONS<sup>2</sup>**

- a. International
  - 1. Universidade de Estadual Campinas Webinar on Keys to Fundable of Business Startups May 2022; Campinas, Brazil. Invited.
  - 2. Universidade de Estadual Campinas Webinar on Keys to Fundable of Business Startups May 2021; Campinas, Brazil. Invited.
  - 3. Universidade de Estadual Campinas on behalf of their Global Partners Network International Panel on How Universities Fund Startups December 2020; Campinas, Brazil. Invited.
  - 4. Universidade de Estadual Campinas on behalf of their Global Partners Network Webinar on Developing Enterprise Skills and Entrepreneurial Thinking Among Students September 2020; Campinas, Brazil. Invited.
  - Technion-Israel Institute of Technology: Neubauer Technology Entrepreneurship Program Invited Lecture – Technology Entrepreneurship Global Trends – July 2017; Haifa, Israel. Invited.

<sup>&</sup>lt;sup>2</sup> "Invited" signifies that the organizers specifically invited Erik Sander vs. a general call for presenters

- Center for Entrepreneurship: Dynamic Entrepreneurship Classroom Three presentations on Technology Entrepreneurship: Similarities and Differences, Teaching Methods that Make an Impact, and Beyond the Classroom – May 2017; Tomsk, Russia. Invited.
- Universidade de Estadual Campinas on behalf of State of São Paulo University Tech Transfer Offices – Workshop on Attracting Startup Company Investment: An International Approach (Sole Instructor) - May 2016; Campinas, Brazil. Invited.
- 8. ECOCAMPi Business Innovation Association International Perspectives on Attracting Investors to Startups (Keynote) May 2016; Campinas, Brazil. Invited.
- USAID and Technological Institute of the Philippines Jointly Funded Workshop on Best Practices in University-Industry Applied Research Collaborations (Sole Instructor) – April 2016; Manila, Philippines. Invited.
- US Association for Small Business and Entrepreneurship (USASBE) Annual Meeting Financing the Tech Startup Workshop for USASBE Tech Entrepreneruship Certificate (Lead Instructor) – January 2016; San Diego, CA. Invited.
- 11. Global Consortium of Entrepreneurship Centers Annual Meeting New Ways Entrepreneurship Centers are Engaging Internationally (Panelist) October 2015; Gainesville, FL. Invited.
- 12. Entrepreneurship Education Learning by Doing capacity building one week course for faculty of Universidade de Estadual Campinas (Lead Instructor) July 2015; Campinas, Brazil. Invited.
- 13. CORFO Engineering 2030 Workshop Key Issues for Effective Design and Implementation of Engineering Innovation: UF Experience May 2015; Santiago, Chile (via Skype). Invited.
- 14. Center for Entrepreneurship: The Entrepreneurship Classroom Five presentations on Technology Entrepreneurship: Similarities and Differences, Teaching Methods that Make an Impact, and Beyond the Classroom May 2015; Vladivostok, Russia. Invited.
- 15. Enhancing University Research and Entrepreneurial Capacity (EURECA) Intl. Conference on Innovation and Entrepreneurship: Today and Tomorrow Technology Entrepreneurship: Teaching Methods that Make a Different May 2015; Moscow, Russia. Invited.
- 16. Bauman Moscow State Technical University Six Master Classes in Engineering Innovation & Entrepreneurship for faculty and students May 2015; Moscow, Russia. Invited.
- 17. PROMAT 2015 Annual Meeting The Role of Education in Innovation March 2015; Chicago, IL. Invited.
- 18. Global Entrepreneurship Week International Conference The Formation of Professional Entrepreneurial Competencies of Young People in Entrepreneurship Education (Keynote) November 2014; Moscow, Russia. Invited.
- 19. Bauman Moscow State Technical University International Conference on Teaching Entrepreneurship: University Integration into the Innovative Economy – Technology Entrepreneurship Beyond the Classroom (Keynote) – November 2014; Moscow, Russia. Invited.
- 20. Universidade de Estadual Campinas Unicamp Ventures Annual Meeting Building a World Class Innovation Ecosystem (Keynote) October 2014; Campinas, Brazil. Invited.
- 21. Universidad del Valle, Colombia Government and Private Sector Leadership Address The Florida Innovation Ecosystem: Leveraging the Academic, Government, and Private Sectors (Keynote) September 2014; Cali, Colombia. Invited.
- 22. Experiential Classroom XV Teaching Technology Entrepreneurship: Differences and Similarities (Master Educator for international university entrepreneurship educators) September 2014; Gainesville, FL. Invited.
- 23. Center for Entrepreneurship: The Entrepreneurship Classroom-Creating Great Entrepreneurship Educators Three presentations on Technology Entrepreneurship: Similarities and Differences,

Teaching Methods that Make an Impact, and Beyond the Classroom – July 2014; Moscow, Russia. Invited.

- 24. Sabixao Digital Masters Webcast Driving Innovation to Change the World May 2014; São Paulo, Brazil. Invited.
- 25. Sultan Qaboos University Faculty and Administration Forum Entrepreneurship and Innovation Programs Best Practices and Practical Applications April 2014; Muscat, Oman. Invited.
- 26. Association of Professional Engineers and University Faculty Engineering Innovation and Entrepreneurship Programs Best Practices December 2013; Santiago, Chile. Invited.
- 27. Creating Entrepreneurial Opportunities-Learning by Doing one week capacity building course for educators of Centro Paula Souza (Lead Instructor) October 2013; São Paulo, Brazil. Invited.
- 28. Presentation to Government Officials of Priai Grande Science, Technology and Innovation for Economic Development October 2013; Priai Grande, Brazil. Invited.
- 29. Experiential Classroom XIV Patterns & Directions in Cross-campus Entrepreneurship (Master Educator for international university educators) September 2013; Gainesville, FL. Invited.
- Fórum Nacional de Gestores da Inovação (FORTEC) 2013 Annual Meeting Workshop on University Entrepreneurship: Global Economic Impact (Lead Speaker) – April 2013, Belo Horizonte, Brazil. Invited.
- 31. University of Porto Technology Innovation and Entrepreneurship Workshop for Institute of Biomedical Engineering, Institute of Molecular Pathology and Immunology, Institute of Molecular and Cell Biology, and Institute for Systems and Computer Engineering (Weeklong Workshop) – June 2012, Porto, Portugal. Invited.
- 32. 2011 Americas Venture Capital Conference; Accelerating Innovation: Alliances and Partnerships for Technology Commercialization Panelist November 2011, Miami, FL. Invited.
- 33. University of Porto Technology Innovation and Entrepreneurship Workshop for Institute of Biomedical Engineering, Institute of Molecular Pathology and Immunology, Institute of Molecular and Cell Biology, and Institute for Systems and Computer Engineering (Weeklong Workshop Sole Instructor) – July 2011, Porto, Portugal. Invited.
- 34. American Society for Engineering Education 2011 Annual Meeting and Exposition; Entrepreneurship Education Learning by Doing June 2011; Vancouver, BC, Canada.
- 35. Science Foundation Ireland Centres for Science, Engineering, and Technologies (CSET) Programme Development Workshop - Creating and Sustaining Partnerships with Companies -March 2011; Dublin, Ireland. Invited.
- 36. The Natural Sciences and Engineering Research Council of Canada Innovation Challenge 2010 Awards Workshop (Primary Speaker) – University Innovation Best Practices - October 2010, Ottawa, Canada. Invited.
- 37. World Bank Proceedings; Annual Bank Conference on Development Economics 2009, Global: People, Politics, and Globalization – "Comment on the Role of Higher Education in High-Technology Industrial Development: What Can International Experience Tell Us" - June 2010, Cape Town, South Africa. Invited.
- Yeungnam University 2010 Workshop on International Collaborations Renewable Energy Technology Developments in the Florida Universities – February 2010; Daegu, Republic of Korea. Invited.
- 39. The Natural Sciences and Engineering Research Council of Canada Innovation Challenge 2009 Awards Workshop (Primary Speaker) – Technology Business Value Creation; - October 2009, Ottawa, Canada. Invited.

- 40. Inaugural CMRDI Workshop on Strengthening Research-Industry Interaction through Technology Transfer, Commercialization, and Intellectual Property Management - Industrial Collaboration and Technology Transfer Global Best Practices (Keynote Speaker); October 2009; Cairo, Egypt. Invited.
- 41. World Congress on Industrial Biotechnology and Bioprocessing The Florida Energy Systems Consortium; July 2009; Montreal, Canada. Invited.
- 42. Advanced Technologies Forum 2009 Saudi Arabia Technology Innovation Centers; April 2009; Riyadh, Kingdom of Saudi Arabia. Invited.
- 43. The Natural Sciences and Engineering Research Council of Canada Innovation Challenge 2008 Awards Workshop (Primary Speaker) – Presenting Your Technology to the Business World; September 2008, Halifax, Canada. Invited.
- 44. The World Bank Annual Bank Conference on Development Economics 2008 Higher Education and High-Tech Industry A Global Perspective June 2008; Cape Town, South Africa. Invited.
- 45. International Business Forum 5th Annual Investing in Tech Transfer and Early Stage Investing Conference – Cutting Edge University-Industry Research and Tech Transfer Collaboration Models – October 2007; Boston, MA. Invited.
- 46. Society of Research Administrators International Annual Conference 2007 SBIR & STTR Programs: The Private Sector, Public Sector and University Trifecta (Conference Best Paper Finalist; SRA Honors Convocation) October 2007; Nashville, TN.
- 47. Particle Engineering Research Center 2006 SSIW International Workshop –Scientists and Engineers as Entrepreneurs (Keynote presentation); April 2006; Gainesville, FL. Invited.
- 48. Commercialization of Micro and Nano Systems (COMS) Conference 2005 Integrating Technology Transfer and Entrepreneurial Programs in University-Industry Collaborations; August 2005; Baden-Baden, Germany.
- 49. International Symposium on the Role of Adsorbed Films and Particulate Systems in Nano and Biotechnologies International Best Practices in Industrial Collaboration and Technology Transfer (Program Chair); August 2005; Gainesville, Florida. Invited.
- 50. 3rd Annual ACS/IEEE International Conference on Computer Systems and Applications Best Practices in International Intellectual Property Management January 2005; Cairo, Egypt. Invited.
- 51. US-Egypt Environmental Remediation Technology Workshop Industrial Collaboration and Entrepreneurship July 2004; Cairo, Egypt. Invited.
- 52. World Nano-Economics Congress World Class Technology Transfer & Entrepreneurial Programs November 2003; London, UK. Invited.
- 53. US-Egypt Metals and Materials Technology Workshop Technology Transfer Through University / Industry Research Centers June 2002; Cairo, Egypt. Invited.

## b. National

- 1. 2021 National Science Foundation Engineering Research Center Planning Grant Workshop Critical Elements of an ERC Innovation Ecosystem October 2021; Virtual. Invited.
- American Society for Engineering Education (ASEE) Conference for Industry and Education Collaboration – Industry Sponsored Research in Universities – January 2020; Orlando, FL. Invited.
- 3. American Society for Engineering Education (ASEE) Conference for Industry and Education Collaboration Government Involvement in Industry-Academic Collaboration January 2020; Orlando, FL. Invited.

- 4. University-Industry Demonstration Partnership (UIDP) Project Summit Precompetitive Research Intellectual Property Approaches January 2018; Mobile, AL. Invited.
- 5. 18<sup>th</sup> Annual HHS SBIR/STTR Conference Regional Programs for Startups Panel (Panelist) November 2016; Orlando, FL. Invited.
- 6. National Science Foundation Engineering Research Center Industrial Liaison Annual Summit Three presentations and panels - Marketing and Communications Best Practices; Making the Most of Intellectual Property; Program Sustainability – August 2016; Seattle, WA. Invited.
- 2015 SEC Symposium on Creativity, Innovation and Entrepreneurship Economic Impact of University Innovation (Moderator); Best Practices in Teaching Entrepreneurship (Panelist) – September 2015; Atlanta, GA. Invited.
- Experiential Classroom XVI Teaching Technology Entrepreneurship: Differences and Similarities (Master Educator for international university entrepreneurship educators) -September 2015; Gainesville, FL. Invited.
- 9. National Science Foundation Industry/University Cooperative Research Center (I/UCRC) Program Annual Meeting – How I/UCRCs Fit into the University Mission and Innovation Strategy – January 2015; Washington, DC. Invited.
- 10. National Science Foundation Engineering Research Center Industrial Liaison Annual Retreat NSF Site Visit Review Best Practices June 2014; Austin, TX. Invited.
- 11. Community of Practice for Engineering Leadership Education and Training Annual Meeting Leading an Engineering Startup (Moderator) March 2014; Houston, TX. Invited.
- 12. National Science Foundation Engineering Research Center Industrial Liaison Annual Retreat Successful Research Center Sustainability June 2013; Ft. Collins, CO. Invited.
- 13. National Science Foundation Engineering Research Center Industrial Liaison Annual Retreat Industrial Collaboration and Innovation Best Practices – June 2013; Ft. Collins, CO. Invited.
- 14. United States Association for Small Business and Entrepreneurship Innovation Partnerships at the University of Florida (co-presenter) January 2013; San Francisco, CA.
- 15. National Science Foundation Engineering Research Center Annual Meeting Engineering Entrepreneurship Best Practices November 2012; Washington, DC. Invited.
- 16. National Science Foundation Engineering Research Center Annual Meeting ERC Innovation Program Expectations November 2012; Washington, DC. Invited.
- 17. NSF/UCF Engineering Leadership Pedagogical Practices and Instructional Strategies Workshop Leadership Curriculum for the Engineer of Tomorrow October 2012; Orlando, FL. Invited.
- 18. National Science Foundation Engineering Research Center Industrial Liaison Annual Retreat Articulating a Major Research Center Value Proposition June 2012; Pittsburgh, PA. Invited.
- 19. National Science Foundation Engineering Research Center Annual Meeting Engineering Innovation National Directions December 2011; Washington, DC. Invited.
- 20. National Science Foundation Engineering Research Center Industrial Liaison Annual Retreat ERC Innovation Best Practices May 2011; Berkeley, CA. Invited.
- 21. National Science Foundation Engineering Research Center Annual Meeting NSF Industrial Liaison Best Practices December 2011; Washington, DC. Invited.
- 22. National Science Foundation Engineering Research Center Annual Meeting Conflict of Interest and Intellectual Property; Best Practices in Innovation Centers December 2010; Washington, DC. Invited.
- 23. Association of University Technology Managers 2010 Eastern Region Meeting Green Energy Technologies as a Mechanism for Promoting Economic Recovery June 2010; Atlanta, GA. Invited.

- 24. National Science Foundation Engineering Research Center Annual Meeting Company Partnership Issues (Moderator) December 2009; Washington, DC. Invited.
- 25. National Science Foundation Engineering Research Center Annual Meeting Research Collaboration Best Practices in Global Economic Downcycles December 2008; Washington, DC. Invited.
- 26. Lockheed Martin Corporation University Relations and Corporate Engineering and Technology Summit – Technical Liaison Strategies and Best Practices; September 2008; Suffolk, VA. Invited.
- 27. University of Pennsylvania Center for the Advanced Study of India Reengineering Engineering Education in India: A Workshop on Vedanta University February 2008; Philadelphia, PA. Invited.
- 28. National Science Foundation Engineering Research Center Annual Meeting Research Centers Worldwide: A Global View November 2007; Washington, DC. Invited.
- 29. National Science Foundation (NSF) Engineering Research Center Annual Meeting –Success as an Engineering Research Center December 2006; Washington, DC. Invited.
- 30. MANCEF Commercialization of Micro and Nanosystems Annual Conference (Session Chair) Real World Technology Transfer; August 2006; St. Petersburg, FL. Invited.
- 31. NSTI Nanotech Ventures 2006 Conference ICU Data Systems; Integrating Patient Monitoring Data in Intensive Care Unit Environments; May 2006; Boston, MA.
- 32. National Science Foundation (NSF) Engineering Research Center Annual Meeting Engineering Research Center Self Sufficiency November 2005; Washington, DC. Invited.
- 33. American Institute of Chemical Engineers (AIChE) 2005 Annual Conference Developing Value Through Synergistic University / Industry Collaborations; October 2005; Cincinnati, Ohio.
- 34. American Institute of Chemical Engineers (AIChE) 2005 Annual Conference Moving Technology to Market; October 2005; Cincinnati, OH
- 35. American Society for Engineering Education Annual Conference The University of Florida Integrated Technology Ventures Program – July 2004; Salt Lake City, UT
- 36. Small Business Administration SBIR National Conference University / Industry Collaboration Panel April 2004; Atlanta, GA. Invited.
- 37. Licensing Executives Society Annual Meeting Nanotechnology and Multi-Disciplinary Research Challenges in a University Environment - September 2003; San Diego, CA. Invited.
- 38. National Science Foundation Engineering Research Center Annual Meeting Partnership Agreement Critical Issues October 2002; Washington, DC. Invited.
- 39. Biomedical Engineering Society Annual Conference- University Technology Transfer and Intellectual Property Management October 2001; Raleigh, NC. Invited.
- 40. National Science Foundation Engineering Research Center Annual Meeting Key Elements of an Industrial Partnership October 2001; Washington, DC. Invited.

## c. <u>Regional</u>

- 1. Southeast Alliance for Graduate Education and the Professorate (University of Florida, University of South Carolina, Clemson University) Professional Speakers Series Intellectual Property and Technology Transfer for University Researchers; December 2006; Gainesville, FL. Invited.
- 2. National Collegiate Inventors and Innovators Alliance (NCIIA) Invention to Venture Conference - Business Planning Best Practices - October 2004; Gainesville, FL. Invited.
- 3. Florida International University Wertheim Thought Leader Lecture Series Commercializing University Generated Technology April 2004; Miami, FL. Invited.

- 4. Procter & Gamble Collaboration Workshop Entrepreneurship for Corporate Engineers November 2003; Cincinnati, OH. Invited.
- d. State
  - 1. EMSI Workforce Collaboration Summit Leadership Forum: Florida's Future Workforce Needs (Panelist) September 2019; Gainesville, FL. Invited.
  - University of Central Florida Faculty Seminar Building an Innovation Ecosystem: A National Perspective from NSF Engineering Research Center Experience – March 2017; Orlando, FL. Invited
  - 3. Lakewood Ranch Business Alliance The State of Talent (Panelist) May 2016; Sarasota, FL. Invited
  - 4. Advanced Manufacturing Association of North Central Florida Meeting Innovations in Advanced Manufacturing (Keynote) September 2013; Gainesville, FL. Invited.
  - 5. Florida Sterling Council STEM Manufacturer / Education Forum Best Practices in Engineering Leadership and Innovation May 2012; Orlando, FL. Invited.
  - 6. USFCONNECT Seminar Series Engaging Technology Investors; April 2012; Tampa, FL. Invited.
  - 7. Florida Energy Summit Innovation and Entrepreneurship Best Practices Workshop (Lead Speaker) September 2010; Orlando, FL. Invited.
  - 8. St. Petersburg College Entrepreneurship Distinguished Speaker Series, Silverberg Entrepreneurial Incubator Celebration Business Planning and Presentations (Keynote), May 2010; St. Petersburg, FL. Invited.
  - 9. Energy Efficiency and Renewable Energy in Florida Presentation to the Florida Energy and Climate Commission and Energy Office of the Governor March 2010; Tallahassee, FL. Invited.
  - 10. BioFlorida Annual Conference Bioenergy Systems Research National Perspectives November 2009; Orlando, FL. Invited.
  - Florida State University Technology Entrepreneurship and Innovation Inaugural Graduate Course
    The Value Proposition and Entrepreneurial Fundraising (Guest Speaker); September 2009; Tallahassee, FL. Invited.
  - 12. Enterprise Florida TEC Council Florida University Renewable Energy Programs; August 2009; Ponte Vedra, FL. Invited.
  - 13. Florida State University Entrepreneurship Workshop The Entrepreneurial Mindset and the Academic Environment; March 2009; Tallahassee, FL. Invited.
  - 14. BioFlorida 11<sup>th</sup> Annual Conference Biotechnology Market Research October 2008; Amelia Island, FL. Invited.
  - 15. Florida Engineering Leadership Institute Florida's High Technology Impact; January 2008, Orlando, FL. Invited.
  - 16. Florida Technology Transfer Conference 2007 International University / Industry Research Center Best Practices (Session Chair) May 2007; Boca Raton, FL. Invited.
  - 17. BioFlorida Annual Conference (Session Chair) Making Strategic Decisions: From Concept to Market; November 2006; Gainesville, FL. Invited.
  - 18. Florida Technology Transfer Conference 2005 Commercializing University Technology for Business Development May 2005; Orlando, FL. Invited.
  - 19. First Annual Florida Technology Transfer Conference Building Unique Industrial Partnership Programs - May 2004; St. Petersburg, FL. Invited.

## e. <u>Local</u>

- 1. Gainesville-Tampa Startup Summit Gainesville as an Incubator August 2018; Gainesville, FL. Invited.
- 2. University of Florida Department of Mechanical and Aerospace Engineering 2015 Annual Awards Banquet – My Journey (Inaugural Keynote) – April 2015; Gainesville, FL. Invited.
- 3. Chamber Advanced Manufacturing Council Meeting UF Advanced Manufacturing Initiatives (Keynote) February 2015; Gainesville, FL. Invited.
- 4. University of Florida/Columbia University I/UCRC Annual Meeting Leadership and Innovation: Nature or Nurture; January 2013; Gainesville, FL. Invited.
- 5. University of Florida Young Researchers Forum Entrepreneurship and Technology Commercialization Primer; March 2009; Gainesville, FL. Invited.
- 6. 2009 Women's Leadership Conference Negotiation Strategies and Best Practices; February 2009, Gainesville, FL. Invited.
- 7. University of Florida Early Stage Startup Series for Faculty Entrepreneurs Technology Company Formation; October 2008; Gainesville, FL. Invited.
- 8. University of Florida Engineering Research Center Industrial Advisory Board Innovation and Entrepreneurship Workshop April 2007; Gainesville, FL. Invited.
- 9. University of Florida Entrepreneurs Forum Corporate Structuring for the University Spinout; January 2007; Gainesville, FL. Invited.
- 10. Gainesville Technology Enterprise Center Entrepreneur Workshop Series The Art of Negotiations August 2004; Gainesville, FL. Invited.
- 11. University of Florida Engineering Advisory Council Entrepreneurial Programs at UF March 2004. Invited.
- 12. UF Engineering Research Center Leadership Workshop Entrepreneurial Leadership April 2003; Gainesville, FL. Invited.

# **INTERNATIONAL INVITED CONSULTING ACTIVITIES**

- 1. Through the USAID Science, Technology, Research and Innovation for Development (USAID STRIDE) Program, providing consultation to the government, private and academic sectors of the Philippines. Specifically, funded by USAID as Visiting Faculty at the Technological Institute of the Philippines to provide consultation in international best practices to assist the academic, private and public sectors in building the nation's innovation ecosystem including deploying technology focused entrepreneurship, innovation and public/private partnership programs and facilities (2016).
- 2. Providing consultation and guest lectures/workshops to various entities in Russia on subjects of university/industry collaborations, building entrepreneurship programs, and creating partnerships to drive an innovation economy. Specifically provided consultation and workshops to the Center for Entrepreneurship, American Councils for International Education, Bauman Moscow State Technical University, and Far Eastern Federal University in Vladivostok (2014-present).
- 3. Building research, education and innovation program collaborations between the University of Florida and the leading universities in Latin America. Specifically, created and continue to serve as the University of Florida lead for collaborative programs with Universidade de São Paulo (USP), Pontificia Universidad Católica de Chile (PUC-Chile), and Universidade Estadual de Campinas (Unicamp), the top three ranked universities in Latin America<sup>3</sup>. Programs include student and

<sup>&</sup>lt;sup>3</sup> Top Latin American Universities, QS World Universities Ranking 2013

faculty exchanges, collaborative research, and jointly developed and delivered entrepreneurship and innovation curricular and experiential programs. Served as Invited Professor for Universidade de Campinas in areas of innovation, entrepreneurship, and building an innovation economy (2013present). Also serve on the Board of Directors of Chilean federal innovation agency CORFO New Engineer for 2030 Consortium of Universidad de Concepción, Universidad de Santiago de Chile and Pontificia Universidad Católica de Valparaíso to foster Engineering Education, Applied Research, Innovation and Entrepreneurship (2016-present).

- 4. Upon referral of the Leader of the US National Science Foundation Engineering Research Center Program, providing on-going program and university research, innovation, technology commercialization and industrial collaborations program reviews, consultation and workshops to Science Foundation Ireland in major programs including Centres for Science, Engineering, and Technologies (CSET), Technology Innovation and Development Award (TIDA) and the Industry Fellowship Programmes. Served on a three member review team to review SFI's primary university research center program (CSET) for design of the next generation of the program and chaired multiple international panels for final review and recommendations to SFI leadership for program funding (2009-present).
- 5. Providing entrepreneurship and innovation workshops and seminars to international corporations (e.g. Procter and Gamble, Lockheed Martin Corporation), international universities and institutes (e.g. Institute of Biomedical Engineering, Institute of Molecular Pathology and Immunology, Institute of Molecular and Cell Biology, and Institute for Systems and Computer Engineering at the University of Porto, Portugal; Yeungnam University, Republic of Korea), and government agencies (e.g. US National Science Foundation, Egyptian Central Metallurgical Research and Development Institute, Canadian Natural Sciences and Engineering Research Council, Science Foundation Ireland) (2005-present).
- 6. Providing regular consultation to the US National Science Foundation in university-industry research center industrial collaboration, technology commercialization, and innovation best practices. Participated in over 20 NSF Engineering Research Center (ERC) site visits, led multiple industrial liaison consulting teams, and provided continued guidance directly to NSF in next generation research center program strategies and structures based on US and international best practices. Currently leading university-industry collaboration and innovation programs review team for all current and near term NSF ERC's. Recognized in 2020 as an all-time Exemplary NSF ERC Industrial Liaison Office who's impact was over the entire national NSF ERC program in the e-book *Agents of Change: NSF Engineering Research Center A History*<sup>4</sup>. Have provided consultation on university-industry collaboration programs to over 25 universities and multi-national corporations internationally through these efforts (2001-present).
- 7. Provided consultation to a number of public and private sector national and international clients in the areas of high technology business formation and growth, university-industry collaborations, technology commercialization, venture investments, intellectual property management, international business development, marketing, and sales, and university and federal lab R&D management and technology commercialization. Blue ribbon client base includes the National Science Foundation, multiple universities world-wide, and leading high-tech companies (2001-present).
- 8. Provided consultation to the premiere university in the Sultanate of Oman, Sultan Qaboos University in areas of entrepreneurship and innovation education and experiential programs, establishing

<sup>&</sup>lt;sup>4</sup> Preston, Lynn and Lewis, Courtland, Agents of Change: NSF Engineering Research Center – A History (<u>https://erc-history.erc-assoc.org/</u>)

technology commercialization programs, building the nation's innovation ecosystem, incubator and accelerator programs, and venture capital assets (2014)

- 9. Provided consultation to the Central Metallurgical Research and Development Institute (Cairo, Egypt) in research laboratory collaborations with industry, leading to establishment of a CMRDI technology commercialization office. CMRDI is one of the leading government research laboratories in Egypt and this program is being designed as a model for other federal-university-industry collaborative programs across Egypt and the Middle East. Providing assistance in all aspects of technology development and commercialization and innovation from initial industrial market assessment and collaboration models (market needs assessment, collaborative research and development, etc.) to innovation and technology commercialization (technology marketing, identifying licensees, spin-out company formation, engaging the entrepreneurial and investment communities, etc.) (2005-2010).
- 10. Served for seven years as the President of a university technology commercialization firm, V2R Group, and provided experience-based, C-level guidance and funding to growing international high-tech companies in markets from productivity enhancements and automation to medical device development. Provide guidance and counsel on myriad business issues such as global market expansion, revenue generation, accessing capital markets, venture capital fundraising, maximizing margins, developing infrastructure, acquisitions and mergers, and building sales and marketing programs. V2R Group's business model is to consistently commercialize cutting edge university R&D internationally by founding and directly investing in spin-out companies and providing the business management and infrastructure to drive substantial and early market penetration (2003-2010).
- 11. Provided consultation to SRI International and King Abdulaziz City for Science and Technology (KACST) in designing and implementing the KACST Technology Innovation Center program across the Kingdom of Saudi Arabia. Provided assistance in overall program strategy, proposal solicitation design, proposal processing and vetting, center operations and interactions with industry and innovation partners, including research program co-funding, intellectual property management, spin-off company formation, etc. Technology Innovation Center program currently being rolled out across the Kingdom (2007-2008).
- 12. Served as a subject matter expert member of the joint US National Science Foundation / US Science and Technology Policy Institute team focused on international research centers best practices. This was an international study of university-based research center best practices in program visioning, research planning and administration, industrial collaborations, technology transfer and commercialization, innovation and entrepreneurship, and education. The program team visited and/or studied 40+ university-industry research centers in 12 countries and produced a report to guide the National Science Foundation's design of Gen3 Engineering Research Centers (2006-2008).
- 13. Worked with representatives of the Arab Science and Technology Foundation in establishing the ASTF Made in the Arab World competition. Consulted to ASTF personnel over a number of years in areas of university-industry research and education collaboration, technology development, intellectual property management, and innovation / business planning and presentations to industry, entrepreneurs, and investors (2004-2008).
- 14. Directed all industrial collaboration and technology transfer activities for the University of Florida Engineering Research Center for Particle Science and Technology. The Center operated with a \$6M annual budget, an industrial membership program of 50+ industrial partners (primarily Fortune 500 and large multi-national corporations) from 25+ industries, and an industrial sponsored research budget of \$3M+. Activities included guiding contract negotiations, intellectual property management, technology transfer, spin-outs and innovation programs, marketing, business development, and all other activities related to industrial collaboration and technology transfer (1997-2004).

## **CONTRIBUTION TO DISCIPLINE AND RESEARCH**

Erik contributes to the research, education, and outreach mission of the University of Florida, and more specifically the College of Engineering, through his skills, experience, and contacts in university-industry collaborations, intellectual property management, technology commercialization, innovation, and entrepreneurship as related to a university environment. Erik carries out his responsibilities through support of the College of Engineering faculty in creating and sustaining a strong culture of industry collaborations and innovation underpinning the research enterprise. Erik supports the UF and College of Engineering education and outreach programs through design, implementation, and deployment of a unique engineering innovation educational program with broad and deep curricular and experiential elements and an active outreach program focused on development and commercialization of UF technologies, as described elsewhere in this package.

While Erik's duties in the Engineering line to not include serving as a PI or Co-PI on research proposals and grants, Erik is very active in supporting faculty in crafting research proposals and in executing the innovation and industry collaboration efforts under research grants across all departments of the College of Engineering. Erik possesses unique industrial, entrepreneurial, and investor community skills, knowledge, and contacts related to university industry R&D collaborations, innovation programs, entrepreneurial and business processes, intellectual property management, agreements between universities and industry, and technology transfer and commercialization that he has leveraged to the benefit of faculty proposals. Erik has assisted with many individual researcher proposals over the years. He has also been a core proposal team member on large center proposals wherein Erik designed and built industrial collaboration and innovation programs and garnered industry support for the proposals and grants. Some examples of major programs in which Erik was a core proposal team member include:

- Multiple Engineering Research Center proposals (e.g. ERC for Particle Science and Technology, ERC for Fingerprinting Life Chemistry with Integrated Technologies, Sustainable Energy Systems ERC, Terahertz Integrated Electronic Systems ERC)
- Multiple Florida Center of Excellence proposals (e.g. Center for Nano-Bio Sensors, Nanomedical Science and Technology Center, UF Comprehensive Drug Development Center, Consortium for Nano Manufacturing Development, Florida Institute for Sustainable Energy, Center for Computational Biology)
- Multiple other centers and programs focused on innovation (e.g. Florida Energy Systems Consortium, NSF Partnerships for Innovation Center for Innovative Brain-Machine Interfaces, Center for High Performance Reconfigurable Computing, Center for Environmental Implications of Nanotechnology, DOE Energy Frontier Research Center in Solar Hydrogen Production, Storage, and Delivery: Ground-Breaking Solutions for the Transportation Economy, IGERT on Global Commercialization of Sustainable Technology)

The above is only a very partial list of proposals and grants in which Erik has had a major role.

Additionally, Erik directed the UF Florida High Tech Corridor Council matching grants research program which provides for seed stage funding of cutting edge university-industry-entrepreneur collaborative R&D leading to technology commercialization. UF has been a core partner of the Florida High Tech Corridor Council (FHTCC) since 2005 and has built a strong Matching Grants Research Program following the

established FHTCC model of co-investing with industry partners in university R&D with high commercial potential. Since 2005, The UF-FHTCC program has funded 39 collaborative R&D projects with large and small companies across the 23 central Florida counties that comprise the Corridor. The UF-FHTCC funds were matched by industry partners with \$4.71M cash plus \$4.34M in-kind - providing a 3.4X industry match to UF-FHTCC project support. UF-FHTCC focused its investments in collaborative R&D projects with companies with high potential for growth and economic impact in Florida. Approximately 75% of the UF-FHTCC projects have been with small company partners, including 19 projects with UF spin-off companies. The program supported key collaborative R&D projects with several UF spinoff companies that are now garnering international recognition and expanding their operations and creating jobs in central Florida and beyond.

## **SERVICE TO K-12**

Erik served as a member of the Buchholz High School (BHS) Academy of Entrepreneurship and BHS Academy of Finance Board of Advisors from 2002-present. In this capacity, Erik provided on-going guidance to the Academies in programming, strategy, fundraising, public policy, and curriculum development. Erik also co-founded a UF mentoring program for BHS Academy of Entrepreneurship students through UF College of Engineering and UF College of Business Administration students. Provided guidance and coaching to 30+ individual students and student teams in national and international business plan and marketing competitions. Established the first joint UF / BHS Academy of Entrepreneurship business plan competition and provided the keynote address at the joint BHS Academy of Entrepreneurship / BHS Academy of Finance Senior Dinner (2006). Erik established the Dianne Lauramoore Student Leadership Award. He was recognized for on-going service as recipient of the BHS Academy of Entrepreneurship Parent of the Year Award in 2007.

## **TEACHING AND INSTRUCTIONAL ACCOMPLISHMENTS**

Erik has developed engineering leadership and innovation/entrepreneurship classroom and experiential education program from 2003-present at the graduate and undergraduate levels in the College of Engineering.

Student Evaluations of Erik as an instructor for courses personally taught in Engineering Entrepreneurship, Engineering Ethics, and Sales Engineering Seminar for over 1,000 Graduate, Undergraduate and Working Professional students over a 12 year period (2003-2015) show an average instructor rating of 4.73 for Erik vs. a College of Engineering Mean Instructor Rating of 4.18 over the same time period. This is on a 1-5 rating scale (1 = Poor, 2 = Below Average, 3 = Average, 4 = Above Average, 5 = Excellent). During the 12 year period of instruction, Erik performed significantly better than the College Instructor Mean in 28 of 29 semesters, with the lone semester that Erik fell below the College Mean being a summer semester when his class involved only a few students and results were skewed by a single student evaluation.

Under Erik's leadership, the College expanded its engineering innovation curricular offerings to include an entrepreneurship certificate program for graduate students across all engineering disciplines. The elements of the Engineering Entrepreneurship Certificate are designed to provide students with a strong foundation in engineering leadership, engineering innovation, and engineering entrepreneurship.

Erik founded and implemented a leadership and innovation curriculum focused on providing students with foundational leadership and innovation skills through the following courses that are offered to graduate and undergraduate engineering students.

- 1. <u>Engineering Leadership (EGN4038 / EGN6039)</u> Engineering Leadership is designed to introduce engineering students to the concepts, theory and practice of engineering leadership; effective written and oral communications and presentations; engineering leadership characteristics, individual differences and self-awareness; developing and building teams; managing change, conflicts, and crises; and understanding real-world ethics and core values.
- Engineering Innovation (EGN4643 / EGN6642) Engineering Innovation introduces engineering students to the concepts of innovative thinking and innovation practices. Using lectures, case studies, team exercises, and guest speakers, the course teaches life skills in innovative thought and action that students can use in careers ranging from starting companies to executing R&D projects in large companies.
- 3. <u>Engineering Entrepreneurship (EGN4641 / EGN6640)</u> Engineering Entrepreneurship introduces engineering students to the concepts and practices of technology entrepreneurial thinking and entrepreneurship. Using lectures, case studies, business plans, and student presentations, the course teaches life skills in entrepreneurial thought and action that students can utilize in starting technology companies or executing R&D projects in large companies. Erik has instructed and mentored over 700 undergraduate and graduate students in this course since 2003.
- 4. <u>Engineering Ethics and Communication (EGN4034 / ESI6912)</u> Engineering Ethics and Communication introduces engineering students to the concepts, theory and practice of engineering ethics and effective written and oral communications and presentations. Students apply classical moral theory and decision making to engineering applications encountered in academic and professional careers.

All of these course offerings are provided on campus and through the Electronic Delivery of Gator Engineering (EDGE) distance education program. Additionally, the curriculum is created in modules which Erik offers to faculty in the College of Engineering for integration into the college core curriculum.

Erik created a learning module to impact undergraduate students from the beginning of their time at UF through the College of Engineering Introduction to Engineering (EGN1002) course taken weekly by most UF engineering freshmen. Starting in fall 2011, Erik developed and delivers a weekly lecture highlighting leadership in innovation to approximately 800 freshmen annually in sections of 20 students.

Erik redesigned and taught the College of Engineering Sales Engineering Seminar (EGN4930) course to include a greater experiential element for the undergraduate upperclass across all engineering disciplines. The course is intended for students interested in pursuing a career in sales engineering and gives students insight into the practice of sales in engineering companies including technical sales of hardware, software and services, locating and identifying prospects, managing time and territory, account management, legal and ethical issues in selling, international issues, and managing a sales force. Practicing sales engineers and technology company leaders provide expertise in the area through guest lectures and discussions with students.

Erik co-founded the Integrated Technology Ventures program within IPPD. This two semester experiential education offering involves the formation of virtual start-up companies to develop engineering prototypes and business collateral (market studies, business plans, investor presentations, etc.) to advance UF College of Engineering technologies to commercialization and provide students with a real world engineering entrepreneurship education. The program brings together undergraduate engineer, MBA, and law students under the direction of a virtual start-up company management team – an externally recruited serial entrepreneur who serves as the company CEO and faculty coaches who serve as the company management. The program has been active since 2003 and typically involves 2-3 virtual companies per year. The program also involves an entrepreneurial lecture series with the following topics that is offered to all IPPD students (~150 seniors) annually:

- 1. Entrepreneurial idea generation and feasibility analysis
- 2. Entrepreneurship and company formation
- 3. Market analysis and research
- 4. Building and working in a multidisciplinary business team
- 5. Business planning and plans
- 6. Marketing in an entrepreneurial environment
- 7. Financing models and Financials

Additionally, Erik has impacted education in other UF units by providing on-going lectures for UF Warrington College of Business Administration Center for Entrepreneurship and Innovation from 1999-present in:

- 1. Building a Winning Team
- 2. The Art of Business Planning
- 3. Business Plans What Makes a Winner
- 4. Presenting the Business Plan
- 5. The Financial Plan What Does It Tell the Investor?
- 6. What Attracts Start-up Investors and Venture Capital
- 7. High-Tech Business Start-up 101
- 8. Entrepreneurial Fundraising
- 9. Investment and Strategic Partner Negotiation Tactics
- 10. Technology Transfer and Economic Development
- 11. Technology Transfer and Product Development
- 12. Technology Commercialization Assessment and Business Analysis