

Dr. Thomas M. Katona

Professor of Innovation & Entrepreneurship
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University Education

MBA Univ. of South Carolina, Moore School of Business – International Business, 2008
Ph.D. University of California at Santa Barbara – Electrical and Computer Engineering, 2003
M.Sc. University of California at Santa Barbara – Electrical and Computer Engineering, 2000
B.Sc. Westmont College – Engineering Physics (Summa Cum Laude), 1996

Professional Experience

Sept. 2025 – Present	Professor of Innovation & Entrepreneurship, California Polytechnic State University, San Luis Obispo, CA.
2020 – Present	College of Engineering, Dept. of Biomedical Engineering Academic Director, Cal Poly Center for Innovation & Entrepreneurship
July 2022 – August 2023	Interim Co-Executive Director, Cal Poly Center for Innovation & Entrepreneurship, San Luis Obispo, CA.
Sept. 2020 – Sept. 2025	Associate Professor of Innovation & Entrepreneurship, California Polytechnic State University, San Luis Obispo, CA. College of Engineering, Dept. of Biomedical Engineering
Aug. 2014 – Sept. 2020	Assistant Professor of Innovation & Entrepreneurship, California Polytechnic State University, San Luis Obispo, CA. College of Engineering, Dept. of Biomedical Engineering
May 2012 – Aug. 2014	Vice President of Products, NEXT Lighting Corp., San Francisco, CA.
Nov. 2011 – May 2012	Director of Business Development, Soraa Inc., Fremont, CA.
Mar. 2009 – Nov. 2011	Director of Marketing, Soraa Inc., Fremont, CA.
Mar. 2009 – Dec. 2009	Acting Director of Device Engineering, Soraa Inc., Santa Barbara, CA.
2007 – Present	Founder, Decegy Consulting, LLC
2007 – Present	Periodic Reviewer for Department of Energy Solid State Lighting Program
Dec. 2006 – Sept. 2008	Research Professor, University of South Carolina Dept. of Electrical and Computer Engineering, Columbia, South Carolina
Nov. 2003 – Dec. 2006	Research and Development Program Manager, Sensor Electronic Technology, Inc., Columbia, South Carolina

Consulting Services Provided

Client	Services Provided
VentureWell	
Department of Energy (DOE)	
Defense Advanced Research Projects Agency (DARPA)	
San Luis Obispo Small Business Development Center (SBDC)	
Quinn Emanuel Urquhart & Sullivan	Expert Witness Case No. 1:15-cv-00535-WO-JEP, Middle District of North Carolina
Quinn Emanuel Urquhart & Sullivan	Expert Witness Case No. 2:16-cv-01453 (JRG) Eastern District of Texas, Marshall Division
Quinn Emanuel Urquhart & Sullivan	Expert Witness Case No. 8:16-cv-00545-SJO-MRW, Central District of California, Western Division
Quinn Emanuel Urquhart & Sullivan	Expert Witness Investigation No. 337-TA-1168, United States International Trade Commission, Washington, D.C.
Quinn Emanuel Urquhart & Sullivan	Expert Witness Case No. 18-cv-01571-JVS (DFM), Central District of California
Quinn Emanuel Urquhart & Sullivan	Expert Witness Investigation No. 337-TA-1213, United States International Trade Commission, Washington, D.C.
Akin Gump Strauss Hauer & Feld LLP	Expert Witness Case No. 8:18-cv-00362-AG-KES, Central District of California
Hartman Zu	Expert Witness Case No. 8:18-cv-00362-AG-KES, Central District of California
Orrick	Expert Witness Case No. 2:19-cv-00291-JRG-RSP, Eastern District of Texas
Mayer Brown	Expert Witness Civil Action No. 2:19-cv-00466-RGD-LRL, Eastern District of Virginia
Radelescu LLP	Expert Witness Investigation No. 337-TA-1261, United States International Trade Commission, Washington, D.C.
Radelescu LLP	Expert Witness Civil Action No. 20-224-LPS, District of

	Delaware
Radelescu LLP	Expert Witness Civil Action No. 1:21-cv-05270-VMC, Northern District of Georgia, Atlanta Division
Sterne Kessler Goldstein & Fox PLLC	Expert Witness Various Patents – Prior Art Analysis & Claim Chart Preparation
Barnes & Thornberg LLP	Expert Witness Case No. 2:22-CV-01476-SMB United States District Court, District of Arizona
Quinn Emanuel Urquhart & Sullivan	Expert Witness: Investigation No. 337-TA-1378, United States International Trade Commission, Washington, D.C.
Quinn Emanuel Urquhart & Sullivan	Expert Witness: CASE NO. 2:23-cv-00495-JRG United States District Court, Eastern District of Texas
Caldwell Clonts Reeder & Thomas	Expert Witness: Case IPR2025-01328 UNITED STATES PATENT AND TRADEMARK OFFICE: BEFORE THE PATENT TRIAL AND APPEAL BOARD

Patents & Patent Applications

Katona; Thomas M., Raring; James W., D'Evelyn; Mark P., Krames; Michael R. , David; Aurelien J. F., *Power light emitting diode and method with uniform current density operation*. U.S. 10,553,754, Feb 4, 2020.

Aldaz; Rafael, David; Aurelien J. F., Feezell; Daniel F., **Katona; Thomas M.**, Sharma; Rajat, Cich; Michael J., *Methods and devices for light extraction from a group III-nitride volumetric LED using surface and sidewall roughening*. U.S. 10,043,946, August 7, 2018.

Katona; Thomas M., Raring; James W., D'Evelyn; Mark P., Krames; Michael R. , David; Aurelien J. F., *Power light emitting diode and method with uniform current density operation*. U.S. 9,985,179, May 29, 2018.

Katona; Thomas, Paolini; Steven, Leonard; Robert, *Linear Lamp Replacement*. US 2017/0299128 A1, March 20, 2017.

Katona; Thomas M., Raring; James W., D'Evelyn; Mark P., Krames; Michael R. , David; Aurelien J. F., *Power light emitting diode and method with uniform current density operation*. U.S. 9,768,353, Sept. 19, 2017.

Katona; Thomas M., Raring; James W., D'Evelyn; Mark P., Krames; Michael R. , David; Aurelien J. F., *Power light emitting diode and method with uniform current density operation*. U.S. 9,564,553, Feb. 7, 2017.

Aldaz; Rafael, David; Aurelien J. F., Feezell; Daniel F., **Katona; Thomas M.**, Sharma; Rajat, *Methods and devices for light extraction from a Group III-nitride volumetric LED using surface and sidewall roughening*. U.S. 9,406,843, August 2, 2016.

Katona; Thomas M., Raring; James W., D'Evelyn; Mark P., Krames; Michael R. , David; Aurelien J. F., *Power light emitting diode and method with uniform current density operation*. U.S. 9,293,644, March 22, 2016.

Katona; Thomas, Paolini; Steven, Sosnick, Randall, *Linear Pendant Luminaire*. US 2015/0300617 A1, February 12, 2015.

Katona; Thomas M., Paolini; Steven., *Elongated linear replacement lamp*. D733,341, June 30, 2015.

Katona; Thomas M., Paolini; Steven., *Elongated linear replacement lamp*. D733,340, June 30, 2015.

Katona; Thomas M., Paolini; Steven., Leonard; Robert., *Linear Lamp Replacement*. WO 2015066069 A1, May 7, 2015.

Aldaz; Rafael., David; Aurelien., Feezel; Daniel F., **Katona; Thomas M.**, Sharma; Rajat., *Methods and devices for light extraction from a group III-nitride volumetric LED using surface and sidewall roughening*. U.S. 9,000,466, April 7, 2015.

Katona; Thomas M., Krames; Michael Ragan., *Providing remote blue phosphors in an LED lamp*. U.S. 8,985,794, March 24, 2015.

Krames; Michael R., D'Evelyn; Mark P., Raring; James W., **Katona; Thomas M.**, *Power light emitting diode and method with current density operation*. U.S. 8,686,458, April 1, 2014.

Katona; Thomas M., Raring; James W., D'Evelyn; Mark P., Krames; Michael R., *Power light emitting diode and method with current density operation*. U.S. 8,502,465, August 6, 2013.

Sharma; Rajat, **Katona; Thomas M.**, Felker; Andrew, *Singulation Method and Resulting Device of Thick Gallium and Nitrogen Containing Substrates*. U.S. 8,313,964, November 20, 2012.

Shum; Frank Tin Chung, **Katona; Thomas M.**, Krames; Michael Ragan., *Back-end Processes for Substrates Re-use*. U.S. 8,153,475, April 10, 2012.

Peer Reviewed Publications

Katona, T.M., Zappe, S. E., Creason, C.R., *Engineering Students Definitions of and Perceptions of Entrepreneurial Failure*. Proceedings of the 2023 Annual Conference & Exposition. Baltimore, MD., June 25-28th, 2023.

Katona, T. M., Zappe, S. E., Dunevich, N., Gase, L., *Qualitative Investigation on the Failure Experiences of Entrepreneurial Engineering Students*. Paper presented at 2021 ASEE Virtual Annual Conference Content Access, Virtual On line.
<https://peer.asee.org/37625>

Katona, T. M., Zappe, S. E., Tranquillo, J. (2020, June), *A Systematic Review of Student Entrepreneurial Failure in Engineering Education*. Paper presented at 2020 ASEE Virtual Annual Conference Content Access, Virtual On line. <https://peer.asee.org/34067>

Lynn E. Metcalf, **Thomas M. Katona**, Jonathan L. York, *University Startup Accelerators: Startup Launchpads or Vehicles for Entrepreneurial Learning?* Entrepreneurship Education and Pedagogy. July 5th, 2020. <https://doi.org/10.1177/2515127420931753>

V. Matthew, J. E. Froyd, R. M. Khatri, **T. M. Katona**, R. Sanders, B. J. Bachman, R. Cole, J. Lovitt, M. Geist, C. Henderson, D. M. Friedrichsen, P. Weilerstein, "Institutionalizing Campus Innovation and Entrepreneurship Programming by Optimizing a Faculty Grantmaking Process: A Case Study". Proceedings of the 2017 ASEE Annual Conference and Exposition. Columbus, OH., June 28, 2017.

L. Metcalf, **T. Katona**, J. York, "An Examination of University Entrepreneurship Accelerators in North America". Proceedings of the United States Association of Small Business and Entrepreneurship. Philadelphia, PA., Jan. 20, 2017.

T. M. Katona, J. L. York, R. Crockett, "Innovation Sandbox: Examining the Impact of Interdisciplinary Innovation Spaces on Diverse Disciplines". Proceedings of the 2016 ASEE Annual Conference and Exposition. New Orleans, LA., June 19-22, 2016.

Thomas M. Katona, Jonathan L. York, Lynne Slivovsky, "Launching an Interdisciplinary Entrepreneurial Capstone Design Experience". Proceedings of the 2016 Open Conference. Portland, OR, March 4-5, 2016.
<http://venturewell.org/open/wp-content/uploads/2016/03/katona.pdf>

Thomas Katona, Steven Tello, Brendan O'Tool, Ilya Avdeev, "Pathways Partners: Entrepreneurial Change Across Campus". *Journal of Engineering Entrepreneurship*. Vol. 7, No. 1, 2016.

T. M. Katona, M. P. Pattison, S. Paolini, "Status of Solid State Lighting Product Development and Future Trends for General Illumination". *Annual Review of Chemical and Biomolecular Engineering*. 7: 263-81, 2016.

R. Crockett, J. L. York, **T. M. Katona**, "Innovation Sandbox: Engineers in a Multidisciplinary Playground". Proceedings of the 2015 ASEE Annual Conference and Exposition, Seattle, WA., June 14-17, 2015.

T. M. Katona, S. Tello, B. O'Tool, I. Avdeev, "Pathways Partners: Entrepreneurial Change Across Campus", Proceedings of the 2015 Open Conference. Washington D.C., Apr. 2015.
<http://venturewell.org/open2015/wp-content/uploads/2013/10/TELLO.pdf>

A. Khan, K. Balakrishnan, **T. Katona**, "Ultraviolet light-emitting diodes based on group three nitrides", *Nature Photonics*, **2**, pp. 77-84 (2008).

- V. Adivarahan, Q. Fareed, M. Islam, **T. Katona**, B. Krishnan, and A. Khan, "Robust 290 nm Emission Light Emitting Diodes over Pulsed Laterally Overgrown AlN", *Japanese Journal of Applied Physics*, Volume 46, No. 36, pp. L877-L879, (2007).
- Q. Fareed, V. Adivarahan, M. Gaevski, **T. Katona**, A. Khan, USC and J. Mei, F. Ponce, ASU, "Metal-Organic Hydride Vapor Phase Epitaxy of AlGa_N Films over Sapphire", *Japanese Journal of Applied Physics*, Volume 46, No. 31, pp. L752-L754, (2007).
- V. Adivarahan, Q. Fareed, S. Srivastava, **T. Katona**, M. Gaevski, and A. Khan, "Robust 285 nm Deep UV Light Emitting Diodes over Metal Organic Hydride Vapor Phase Epitaxially Grown AlN/Sapphire Templates", *Japanese Journal of Applied Physics*, Volume 46, No. 23, (2007).
- P. Vitta, N. Kurilcik, S. Jursenas, A. Zukauskas, A. Lunev, Y. Bilenko, J. Zhang, X. Hu, J. Deng, **T. Katona**, R. Gaska, "Deep-UV light-emitting diodes for frequency-domain measurements of fluorescence lifetime in basic biofluorophores" *Appl. Phys. Lett.*, **86**, (2005)
- J. P. Zhang, X. Hu, A. Lunev, J. Deng, Y. Bilenko, **T. M. Katona**, M. S. Shur, R. Gaska, M. A. Khan, "AlGa_N Deep-Ultraviolet Light-Emitting Diodes." *Japanese J. Appl. Phys.* **Vol. 44**, No. 10, Pg. 7250-53 (2005).
- Y. Bilenko, A. Lunev, X. Hu, J. Deng, **T. M. Katona**, J. Zhang, R. Gaska, M. S. Shur, W. Sun, V. Adivarahan, M. Shatalov, A. Khan, "10 Milliwatt Pulse Operation of 265 nm AlGa_N Light Emitting Diodes." *Japanese J. Appl. Phys.* **Vol. 44**, No. 3, L98-L100 (2004).
- J. Piprek, **T. M. Katona**, S. P. DenBaars, S. Li, "3D Simulation and Analysis of AlGa_N/Ga_N Ultraviolet Light-Emitting Diodes," *Proceedings of the SPIE*. **Vol. 5366** pp. 127-136 (2004).
- T. M. Katona**, M. D. Craven, J. S. Speck, S. P. DenBaars, "Cathodoluminescence Study of Deep Ultraviolet Quantum Wells Grown on Maskless Laterally Epitaxial Overgrown AlGa_N," *Appl. Phys. Lett.* **85** (8) 1350 (2004).
- T. M. Katona**, P. Cantu, S. Keller, Y. Wu, J. S. Speck, S. P. DenBaars, "Maskless Lateral Epitaxial Overgrowth of High Composition Al_xGa_{1-x}N," *Appl. Phys. Lett.* **84** (24) 5025 (2004).
- P. Waltereit, H. Sato, C. Poblenz, D. S. Green, J. S. Brown, M. McLaurin, **T. Katona**, S. P. DenBaars, J. S. Speck, J-H. Liang, M. Kato, H. Tamura, S. Omori, C. Funaoka, "Blue Ga_N-based Light-Emitting Diodes Grown by Molecular-Beam-Epitaxy with External Quantum Efficiency Greater than 1.5%." *Appl. Phys. Lett.* **84**, pp.2748-2750. (2004).
- T. M. Katona**, T. Margalith, C. Moe, M. C. Schmidt, S. Nakamura, J. S. Speck, S. P. DenBaars, "Growth and Fabrication of Short Wavelength UV LEDs," *Proceedings of the SPIE, Third International Conference on Solid State Lighting*, **5187**, pgs. 250-59, (2004).
- T. Onuma, S. F. Chichibu, A. Uedono, T. Sota, P. Cantu, **T. M. Katona**, J. Kaeding, S. Keller, U. K. Mishra, S. Nakamura, S. P. DenBaars, "Radiative and Nonradiative Processes in Strain-Free Al_xGa_{1-x}N Films Studied by Time-Resolved Photoluminescence and Positron Annihilation Techniques," *Journal of Appl. Phys.* **95** (5), pp. 2495-2504 (2004).
- T. M. Katona**, M. C. Schmidt, T. Margalith, C. Moe, H. Tamura, H. Sato, C. Funaoka, R. Underwood, S. Nakamura, J. S. Speck, S. P. DenBaars "336 nm ultraviolet LEDs grown

with AlN interlayers for strain reduction” *Physica Stat. Sol. (c)*, Vol 0. Iss. 7, pgs. 2206-2209 (2003).

C. Roder, H. Heinke, D. Hommel, **T. M. Katona**, J. S. Speck, S. P. DenBaars, "Crystallographic Wing Tilt in Laterally Overgrown GaN" *J. Phys. D: Appl. Phys.* **36** A188-A191 (2003).

T. M. Katona, J. S. Speck, S. P. DenBaars “Effect of the nucleation layer on stress during cantilever epitaxy of GaN on Si (111).” *Physica Status Solidi A*, vol. 194, (no. 2), 2002. pgs. 550-553.

T. M. Katona, J. S. Speck, S. P. DenBaars “Control of crystallographic tilt in GaN grown on Si (111)” *Applied Physics Letters*, vol 81, No. 19, Nov. 4, 2002. p. 3558.

T. M. Katona, M. D. Craven, P. T. Fini, J. S. Speck, S. P. DenBaars, "Observation of crystallographic wing tilt in cantilever epitaxy of GaN on silicon carbide and silicon (111) substrates." *Applied Physics Letters*, vol 79, No. 18, 29 Oct. 2001. p. 2907.

M. Hansen, A. C. Abare, P. Kozodoy, **T. M. Katona**, M. D. Craven, J. S. Speck, U. K. Mishra, L. A. Coldren, S. P. DenBaars, "Effect of AlGaIn/GaN Strained Layer Superlattice Period on InGaIn MQW Laser Diodes." *MRS Internet J. Nitride Semicond. Res.* **5S1**, W1.4 (2000).

M. Hansen, A. C. Abare, P. Kozodoy, **T. M. Katona**, M. D. Craven, J. S. Speck; U. K. Mishra; L. A. Coldren; S. P. DenBaars, "Effect of AlGaIn/GaN strained layer superlattice period on InGaIn MQW laser diodes". *Physica Status Solidi A*, vol.176, (no.1), (3rd International Conference on Nitride Semiconductors, Montpellier, France, 4-9 July 1999.) Wiley-VCH, 16 Nov. 1999. p.59-62.

T. M. Katona, S. W. Pierson, "Zero-field current-voltage characteristics in high-temperature superconductors". *Physica C*, vol.270, (no.3-4), Elsevier, 20 Oct. 1996. p.242-8.

S. W. Pierson, **T. M. Katona**, Z. Tesanovic, O. T. Valls, "Critical fluctuations and lowest-Landau-level scaling of the specific heat of high-temperature superconductors". *Physical Review B (Condensed Matter)*, vol.53, (no.13), APS through AIP, 1 April 1996. p.8638-42.

T. M. Katona, S. W. Pierson, "Zero-field current-voltage characteristics in high- T_c superconductors". *Czechoslovak Journal of Physics*, vol.46, suppl., pt.S3, (21st International Conference on Low Temperature Physics, Prague, Czech Republic, 8-14 Aug. 1996.) Acad. Sci. Czech. Republic, Inst. Phys, 1996. p.1765-6.

Recent Presentations (Presenting Author Only [* indicates presentation with student participation])

Katona, T.M., Zappe, S. E., Creason, C.R., *Engineering Students Definitions of and Perceptions of Entrepreneurial Failure*. Presented at 2023 Annual Conference & Exposition. Baltimore, MD., June 25-28th, 2023.

Katona, T.M., Zappe, S.E., *Entrepreneurship Support: What Entrepreneurship Programs Provide vs. What Students Want*. Presented VentureWell OPEN Conference, Washington, D.C., Mar. 21-23, 2023.

Work in Progress: Qualitative Investigation on the Failure Experiences of Entrepreneurial Engineering Students, 2021 ASEE Annual Conference and Exposition. Virtual Conference. July 2021.

FailWell: Proactive and Reactive Strategies for Helping Student Entrepreneurs, VentureWell OPEN Conference. Washington, D.C., March 2021.

The Essentials of I&E Education: Pre-Conference Workshop, VentureWell OPEN Conference. Washington, D.C., Mar. 28. 2019.

University Entrepreneurial Accelerators: Defining Assessment to Prevent Their Demise. VentureWell OPEN Conference. Austin, TX., Mar. 31. 2018.

An Examination of University Entrepreneurship Accelerators in North America. 2017 United States Association of Small Business and Entrepreneurship Annual Conference. Philadelphia, PA., Jan. 20, 2017.

Innovation Sandbox: Examining the Impact of Interdisciplinary Innovation Spaces on Diverse Disciplines. 2016 ASEE Annual Conference and Exposition. New Orleans, LA., June 19-22, 2016.

Why LEDs Will Change the Game and What's Needed. Department of Energy Working Group for Animals and Lighting. Chicago, IL. April 23rd, 2016.

The Future of Lighting: Is the Game Over? Phosphor Global Summit. Newport Beach, CA. March 7th, 2016.

***Launching an Interdisciplinary Entrepreneurial Capstone Design Experience: Blast-Off or Fizzle Out?** Cal Poly Faculty and Student Led Workshop at the VentureWell OPEN Conference. Portland, OR., March 4th, 2016.

***University Accelerators: Entrepreneurial Launchpads or Unsustainable Fads?** Workshop facilitated at the United States Association for Small Business and Entrepreneurship. San Diego, CA. January 11th, 2016.

Interdisciplinary Entrepreneurial Senior Capstone Design Experience. Global Consortium of Entrepreneurship Centers Annual Conference. Gainesville, FL., October 30th, 2015.

Building an Entrepreneurial Culture Through "Faculty" Hiring. VentureWell OPEN Conference. Washington, D.C., March 21st, 2015.

Perspectives on Domestic Manufacturing. Department of Energy Solid-State Lighting Manufacturing R&D Workshop. San Diego, CA. May 7th, 2014.

Thinking Beyond the Tube. Strategies in Light. Santa Clara, CA. February 2013 (Invited Speaker).

Better Solutions for Linear Lighting: Thinking Outside the Tube. Design Lights Consortium Stakeholders Meeting. Atlanta, GA. Oct. 2012 (Invited Speaker)

AlGaIn Multiple Quantum Well Based Deep UV Light Emitting Diodes. Photonics West. San Jose, CA. January 2008.

AlGaIn-Based Deep UV Photodiodes with 330 nm Spectral Cutoff. ICNS 2007. Las Vegas, NV. September 2007.

AlGaN Based Compact UV Light Emitting Diodes for Fluorescence Applications. Conference on Lasers and Electro-Optics (CLEO). Baltimore, MD. May 2007 (Invited Speaker).

Advanced GaN-Related Devices and Materials Interactions. MSMXV Conference. Cambridge, England. April 2007

Development of Deep UV LEDs and LED Based Lamps. ISDRS 2005. Bethesda, MD. December 2005 (Invited Speaker).

Deep UV Light Sources for Optically Based Sensors. SPIE Conference on Optically Based Biological and Chemical Sensing for Defense II. Brugge, Belgium. Sept. 2005 (Invited Speaker).

AlInGaN-Based UV Sources and Systems for Water Purification. WQTC 2004. San Antonio, TX. November 2004.

Transistors and Deep UV LEDs on Bulk Nitride Substrates. Int. Workshop on Bulk Nitride Substrates, Zakopane, Poland Sept. 2004.

Growth and Fabrication of Short Wavelength UV LEDs. SPIE Conference on Solid State Lighting, San Diego, CA. August 2003.

Growth of UV LEDs Utilizing AlN Interlayers for Strain Reduction. International Conference on Metalorganic Vapor Phase Epitaxy, Keystone, CO. July, 2003.

336 nm Ultraviolet LEDs Grown with AlN Interlayers for Strain Reduction. International Conference on Nitride Semiconductors, Nara, Japan. May 2003.

Solid State White Lighting: Illuminating the Future with LEDs. COMDEX 2002. Las Vegas, NV. November 2002.

Effect of the Nucleation Layer on Stress During Cantilever Epitaxy of GaN on Si (111). International Workshop on Nitride Semiconductors 2002. Aachen, Germany. July 2002.

Next Generation Optoelectronic Devices based on III-V Nitride Semiconductors. Westmont College Natural Science Seminar. Santa Barbara, CA. April 2002. (Invited Speaker)

Cantilever Epitaxy of Low Defect Density GaN on Silicon Carbide and Si (111) Substrates. Fall MRS Conference, Boston, MA. November 2001.

Selected Research Grants

VentureWell E-Team Phase I Grant for student entrepreneurial venture Everest Medical, Student Team: Jenna Eissman (Masters Candidate in Technology Management), Maddie Mumford (Masters Candidate in Biomedical Engineering), **(PI: 6 months - \$5,000)** May 2025.

VentureWell E-Team Phase II Grant for student entrepreneurial venture Ecoplasticity. Student Team: Mayela Fernandez (MBA Student), Michelle Cullin (Materials Engineering). **(PI: 2 years - \$20,000)** Mar. 2025.

VentureWell E-Team Phase I Grant for student entrepreneurial venture Ecoplasticity. Student Team: Mayela Fernandez (MBA Student), Michelle Cullin (Materials Engineering). **(PI: 6 month - \$5000)** Jun. 2024.

VentureWell E-Team Phase II Grant for student entrepreneurial venture De Oro Devices. Student Team: Owen Works (Industrial Engineering), Camden Ford (Biomedical Engineering). **(PI: 2 Years - \$20,000)** Mar. 2024.

VentureWell E-Team Phase I Grant for student entrepreneurial venture Horizen Biotech. Student Team: Owen Works (Industrial Engineering), Camden Ford (Biomedical Engineering). **(PI: 6 month - \$5000)** Nov. 2023.

National Science Foundation Research Initiation in Engineering Formation (NSF-RIEF) Grant, “Collaborative Research Initiation: Educational Methods for Teaching Adaptive Responses to Entrepreneurial Failure”. **(PI: 2 Years - \$151,155)** Sept. 2020.

VentureWell Research Planning Grant. Research planning grant on work understanding the educational impact and effects of entrepreneurial venture failure on student entrepreneurs. **(PI: 3 Day Research Retreat - \$750)** August 2019.

VentureWell E-Team Phase II Grant for student entrepreneurial venture De Oro Devices. Student Team: Sidney Collins (Biomedical Engineering), Adam Schwartz (Business Administration). **(PI: 2 Years - \$20,000)** Mar. 2019.

VentureWell E-Team Phase I Grant for student entrepreneurial venture De Oro Devices. Student Team: Sidney Collins (Biomedical Engineering), Adam Schwartz (Business Administration). **(PI: 6 month - \$5000)** Dec. 2018.

VentureWell E-Team Phase I Grant for student entrepreneurial venture Maternal Innovations Development. Student Team: Sara Della Rippa (Biomedical Engineering), Quentin Kleuter (Biomedical Engineering). **(PI: 6 month - \$5000)** Dec. 2018.

“Central Coast Innovation Lab and Accelerator Development Project”, Economic Development Administration **(Co-PI: 3 year grant - \$500,000)** Sept. 2017

VentureWell E-Team Phase II Grant for student entrepreneurial venture SpotDrop – Pressure Compensated Precisely Adjustable Drip Emitter for Variable Irrigation. Student Team: Adrian Eaton (Mechanical Engineering), Joe Jennings (Electrical Engineering), Andrew Krippner (Mechanical Engineering), Haden Lynn (Business), Kate Newton (Business/Entrepreneurship), Harrison Waschura (Electrical Engineering). **(PI: 2 year Grant Extension \$20,000)** Mar. 2017.

VentureWell E-Team Phase I Grant for student entrepreneurial venture SpotDrop – Pressure Compensated Precisely Adjustable Drip Emitter for Variable Irrigation. Student Team: Adrian Eaton (Mechanical Engineering), Ian Nielson (Electrical Engineering). **(PI: 6 month - \$5000)** Nov. 2016.

“Interdisciplinary Innovation & Entrepreneurship Capstone Experience”, VentureWell Faculty Course Development Grant **(PI: 2 year Grant Extension- \$20,000)** Aug. 2016

Orfalea College of Business Summer Stipend for research on University Entrepreneurship Accelerators **(Co-PI: 3 month - \$4,000)** June 2016

VentureWell E-Team Phase II Grant for student entrepreneurial venture Mantis Composites – Multiaxis Carbon Fiber 3D Printing. Student Team: Ryan Dunn (Aeronautical Engineering), Michael Chapiro (Materials Engineering), Michael Delay (Electrical Engineering), David Zilar (Aeronautical Engineering). **(PI: 2 year Grant Extension - \$20,000)** June 2016

VentureWell E-Team Phase I Grant for student entrepreneurial venture Mantis Composites – Multiaxis Carbon Fiber 3D Printing. Student Team: Ryan Dunn (Aeronautical Engineering), Michael Chapiro (Materials Engineering), Michael Delay (Electrical Engineering), David Zilar (Aeronautical Engineering). **(PI: 6 month - \$5,000)** Nov. 2015

“Interdisciplinary Innovation & Entrepreneurship Capstone Experience” VentureWell Faculty Course Development Grant **(PI: 2 year - \$27,260)** May 2015

“UV LED-Based Portable Water Purification System” National Science Foundation Supported SBIR Phase I Contract (6 month - \$100K) July 06 – Dec. 06

"Growth of Bulk AlGaIn Substrates Using a Modified Hydride Vapor Phase Epitaxy Reactor" National Science Foundation Supported SBIR Phase I Contract (6 month - \$100K) Jan. 06 – June 06

"AlInGaIn-Based Deep Ultraviolet Light Emitting Diodes" DHS Supported SBIR Phase II Contract Extension (24 month - \$1.8M) Dec. 2005 – Dec. 2007

"High Power AlGaIn/InGaIn/AlGaIn/GaN Recessed Gate Heterostructure Field Effect Transistor with InGaIn as the RIE Etching Stop Layer" DARPA Supported SBIR Phase II Contract (24 month - \$0.75M) Dec. 2005 – Dec. 2007

"Novel GaIn-Based HFET Sources and Amplifiers for Millimeter-Wave Applications" U. S. Army Supported STTR Phase I Contract (6 month - \$100K) Sept. 05 - Feb. 06

"InGaIn-Channel Heterostructure Field Effect Transistor With Double Recessed Gate for Improved RF Performance" Army Research Lab Supported SBIR Phase I and Phase I Option (6 month - \$70K + 4 month option - \$50K) Jan. 05 - Apr. 06 [24 month Phase II effort approved, not yet signed]

"High Power Deep UV LED Based Lamps" National Science Foundation Supported SBIR Phase I Contract (6 month - \$100K) July 05 – Dec. 05 [Phase II Proposal Currently Under Review]

"High Power Microwave Limiters based on GaIn Technology" Office of Naval Research Supported SBIR Phase I Contract (6 month - \$100K) Oct. 04 – Apr. 05

"Ultraviolet Aluminum Gallium Nitride (AlGaIn)-based Avalanche Photodiode Grown over Single Crystal Bulk Aluminum Nitride (AlN) Substrates" NASA Supported SBIR Phase I Contract (6 month - \$70K) Apr. 04 – Oct. 04

"Development of Multi-Wafer Growth Reactor with Migration Enhanced MOCVD Capability for AlInGaIn Based Transistor Wafer Production" U.S. Air Force Supported SBIR Phase I Contract (6 month - \$100K) Apr. 04 - Oct. 04

"AlInGaIn-Based Deep Ultraviolet Light Emitting Diodes" DARPA SBIR Phase II Contract (24 month - \$1.1M) Dec. 2003 – Dec. 2005

General Service

Academic Director for Cal Poly CIE	June 2023 – Present
Entrepreneurship Concentration Coordinator	June 2023 - Present
Entrepreneurship Minor Coordinator	June 2023 - Present
Entrepreneurship Student Scholarship Review Chair (3 Scholarships Annually)	Apr. 2023 - Present
Hiring Committee for Entrepreneurship Tenure Track Faculty	Feb. 2023 – June 2023
Hiring Committee for Entrepreneurship Full-Time Lecturers (2 positions)	Apr. 2023 – June 2023
Chair – Cal Poly Materials Science DPRC Committee	Oct. 2022 – June 2023
Chair - Hiring Committee for the Cal Poly Center for Innovation & Entrepreneurship Executive Director	Sept. 2022 – Mar. 2023
College of Engineering Professional Leave Committee	Nov. 2021 - Present
Hiring Committee for the BMED Dept. Administrative Assistant	Sept. 2021 – Nov. 2021
Conference Advisory Group Member and Community Lead for Conference Track on <i>Collaborating for Impact: Fostering Startup Ecosystems in Higher Education</i> . VentureWell Open Conference 2020 (Community)	Sept. 2019 – Mar. 2020
Hiring Committee for the CIE Executive Director (University)	June. 2019 – Dec. 2019
BioMedical Engineering Hiring Committee (Department)	Nov. 2018 – Dec. 2019
BioMedical Engineering Design Curriculum Committee (Department)	Sept. 2018 - 2019
Chair of Hiring Committee for the CIE Director of Student Innovation Programs (University)	Aug. 2018 – Feb. 2019
Internal Program Reviewer, Orfalea College of Business Graduate Programs (College)	Sept. 2017 – July 2017
Orfalea College of Business MBA Redesign Task Force (College)	Sept. 2017 – April 2017
Faculty Grant Proposal Reviewer, VentureWell Pathways Institutionalization Proposals (Community)	June – July 2017
Chair of BMED Dept. Faculty Hiring Committee (Department)	June 2016 – Mar. 2017

Faculty Director of Innovation for the CIE (University)	Aug. 2015 – June 2023
Faculty Advisor, Cal Poly Innovation Sandbox Club (University)	Oct. 2014 – Sept. 2023
Faculty Director, Innovation Quest Competition (University)	Aug. 2014 – Present
Peer Reviewer for Department of Energy Solid State Lighting Program (Community)	2007 – Present
Judge and Team Mentor for CIE Sponsored Central Coast TechPitch Competition (Community)	Oct. 2014
Peer Reviewer for the United States Association of Small Business & Entrepreneurship (USASBE) Conference (Community)	Oct. 2015 - Present
Peer Reviewer for Entrepreneurship & Engineering Innovation Division for ASEE Annual Conference and Exhibition (Community)	Oct. 2014 - Present
Peer Reviewer for DARPA Laser UV Sources for Tactical Efficient Raman (LUSTER) Program Member ASEE (Community)	Mar. 2014 – 2017
Peer Reviewer for VentureWell Open Conference (Community)	Jan. 2015 – Present

Professional Memberships

Member: American Society for Engineering Education	Sept. 2014 – Present
Member: United States Association of Small Business and Entrepreneurship (USASBE)	Jan. 2016 - Present

Courses Taught

ENGR 234:	Introduction to Design Thinking
ENGR 459-461:	Multidisciplinary Senior Design Project (Industry Sponsored Section)
ENGR 463-465:	Interdisciplinary Entrepreneurial Senior Design Project I-III
BUS 310:	Introduction to Entrepreneurship
BUS 436:	Entrepreneurial Finance
ENGR/BUS 470:	Issues in Entrepreneurial Venture Growth
Sustainable Entrepreneurship – Co-Taught at the Munich University of Applied Sciences Summer Program	
Business Model Innovations – Co-Taught through Cal Poly Extended Education	