

ANN D. KAISER

akaiser@projectengin.com

(401)578-8281

EXPERIENCE

ProjectEngin LLC **2014- Present**
CEO

STEM Education Consultant

Project, program, and curriculum design to facilitate the inclusion of Engineering Design in K-12 curriculum. Custom designed coaching and workshops meant to create lasting change in the classroom and advocacy among faculty members . Projects can also be designed to incorporate arts, cultural, and global awareness.

Fulbright Distinguished Teacher **2012-2013**

Researched the use of Engineering Design projects in secondary schools in Singapore. Developed co-teaching professional development model to facilitate pedagogical change. Created first draft of a guide for science teachers implementing Engineering Design projects.

LaSalle Academy Providence RI **1999-2014**

AP Physics Teacher and Engineering Teacher

Previous courses include Algebra 1 and Algebra 2. Developed and implemented curriculum for AP Physics B and C. Developed and implemented curriculum for a project-based introductory Engineering course.

Brown University Providence RI **1990**

Research Assistant Department of Material Science

Conducted research on niobium/aluminum super alloys. Focus on material structure and resulting mechanical and thermal properties.

Thielsch Engineering Associates Cranston RI **1989**

Consulting Engineer

Projects involved failure analysis, performance improvements, and material specification.

Precision Metallurgical Corporation Attleboro MA **1984-1987**

Manager New Product Engineering (1985-1987)

Product Specialist (1984-1985)

Coordinated new product development, focusing on precious metal products for electrical, electronic and medical applications. Provided technical liaison between customers' engineering and design and PMC marketing.

Pfizer Inc. Specialty Metals Division Wallingford CT 1982-1983
Metallurgical Sales Engineer

Airco Industrial Gases Murray Hill NJ 1980-1982
Metallurgical Engineer

INTERNSHIPS
1977-1980

Rockefeller Foundation New York, NY
CF & I Steel Corporation Pueblo, CO
Dr. D. N. Beshers Columbia University
Ford Motor Company Dearborn, MI

EDUCATION

Columbia University New York, NY
School of International and Public Affairs
Master of International Affairs (MIA) May 1980
Specialization in World Resources and Technology Transfer
International Fellow 1979-1980

Columbia University New York, NY
School of Engineering and Applied Science
B.S. Metallurgy May 1979
Various academic honors

Brown University Providence, RI
Department of Material Science
Graduate course work **1990**

AWARDS, PUBLICATIONS, AND PRESENTATIONS

AWARDS

Small Business Administration Micro-entrepreneur of the Year 2017, New England region

Invited Panelist, National Academy of Engineering Convocation on Teacher Preparation for K-12 Engineering. National Academy of Sciences Washington DC Sept. 30 – Oct.1, 2016

<https://www.nap.edu/read/24700/chapter/1>

Keynote Speaker, Danish National Science Education Conference, Roskilde, Denmark, March 2015

Member, Fulbright Review Panel, Institute of International Education, Washington, DC, February 2015

Reviewer, Frontiers in Education Conference, ASEE, 2015

Nominee, Fulbright Alumni of the Month, Institute for International Education, November 2014

Top Overseas Teacher Award, Invited Presenter, Teachers Conference 2014, Singapore, June, 2014

Reviewer, Fulbright Distinguished Teacher Awards, January 2014

Fulbright Distinguished Teacher Award, Singapore, 2012-2013

International Fellow, Columbia University School of International and Public Affairs, 1979-80

Life member, Tau Beta Pi (International engineering honor society)

PRESENTATIONS

“Designing Innovative Solutions to Global Challenges”, TABS Global Conference, Newport, RI, April 2019

“E is the Key: Primary Power””, NCEA Conference, Chicago, IL, April 2019

“Empathy, Engagement, Empowerment: Engineering Solutions to Global Challenges” DC Public Schools GlobalEdCon, Washington, DC, October 2018

“E is the Key: Engineering Engaging and Empowering Learning Experiences in Your STEM Classes” Atlanta/Savannah Dioceses Teachers Conference, Atlanta, GA, October 2018

“Meaningful Assessment Methods in Project-based STEM and STEAM Classrooms”, NCEA Assessment Symposium, Philadelphia, PA, June 2018

“From United Nations SDGs to STEAM Projects: Engineering a Better World” GlobalMindEd Conference, Denver, CO, June 2018

“STEM Outreach Toolkit”, SIMConnectLive Conference, Dallas, TX, April 2018

“Engineering Design in STEM and STEAM Curriculum”, Institute for Catholic Schools Curriculum Leadership Team Symposia, St. John’s University, New York, NY, November 2017 and March 2018

“Creativity, Critical Thinking, and Global View in the K-12 STEM Classroom: Engineering Entrepreneurship, Empathy, and Empowerment, GlobalMindEd Conference, Denver, CO, June 2017

“Maximizing the E in STEM Engineering Engagement, Enthusiasm, Empowerment, and Empathy in Your Classroom”, NCEA Conference, St. Louis, MO, April 2017

“Engineering Solutions to Global Challenges; Primary and Secondary School Curriculum”, Practical Pedagogies Conference (International Schools), Toulouse, France, November 2016

“EngineerGOOD: Global Challenges, Local Solutions”, Global Education Forum, Asia Society, Philadelphia, PA, October 2016

“Fostering a Matrix of Innovation in K-12 Classrooms; Engineering in the NGSS” RI Association of School Principals, East Greenwich RI, August 2016

“Engage Your Inner Engineer: Capitalizing (on) the “E” in STEM” NSTA STEM Forum, Denver CO, July 2016

“Engineer Good: Engineering Solutions to Global Challenges” NCEA STREAM Symposium, Philadelphia, PA June 2016 (invited presenter)

“ENGINEERING BY Nature Bio-inspired Materials”, Design Science Symposium, RI School of Design, Providence, RI May 2016

“The Evolution from Science to Engineering in the K-12 STEM Classroom” Rhode Island ASCD, Johnston RI, May 2016

“An Appropriate Technology Response to Disasters: Using Local Materials for Housing” Materials in STEM (MAST) Conference, Cocoa Beach, FL November 2015

“Engineering Curriculum for Global Issues; Focus on Light” Massachusetts Association of Science Teachers, Framingham MA, November 2015

“Engineering Design Projects to Develop Culturally Appropriate Technologies for a Sustainable World”, Global Education Forum, Asia Society, Philadelphia, PA, October 2015

“Engage Your Inner Engineer - The Evolution from Science to Engineering in the STEM Classroom” STEM Think Tank, Nashville, TN July 2015

“Building a Better World: Engineering Disaster-Proof Housing” ASEE K-12 Workshop, Seattle, WA, June 2015

“Engineering Innovative STEM Curriculum” Danish National Science Education Conference, Roskilde, Denmark, March 2015

“Engineering: The NGSS and Beyond” Rhode Island Science Teachers Association, March 2015

“From Micro to Macro: How Microstructure Affects Macroscopic Material Properties” National Educators Workshop, Seattle, November 2014 (peer-reviewed published work)

“A Modular Approach to Using the Engineering Design Process in Secondary Science Curriculum; Experiences in Singapore and the United States” (peer reviewed publication) Frontiers in Education (FIE) Conference, Madrid, October 2014

“How to ReEngineer High School Science” revision 1 (Work in progress)

“The Use of Engineering Projects to Include Ethics, Values and Global Citizenship Issues in Science Curriculum” Teachers Conference 2014, Singapore, June 2014

“Using Engineering Design Projects in Physics Courses” National Science Teachers Association Conference Boston, MA, April 2014

“Engineering Design Projects in Science Courses; Experiences in Singapore and the United States” Rhode Island Science Teachers Association Co, Providence, RI, February 2014

“Engineering a Better World” LaSallian Huether Conference, New Orleans, LA, November 2013

Fulbright Alumni Panelist, Washington DC, August 2013

“Redesigning Teaching Science” School of Science and Technology, Singapore, July 2013

“Introducing Engineering Design Projects in Physics Class” Fulbright Session, Academy of Singapore Teachers, Singapore, May 2013

“Re-Engineering Physics” Academy of Singapore Teachers, Singapore, March 2013

“Incorporating “Engineering” Thinking into Traditional Math and Science Curriculum” ITEEA Conference, Long Beach, CA, March 2012

“Encouraging Creativity in Engineering” International Technology and Engineering Education Association (ITEEA) Conference, Minneapolis, MN, March 2011

“Developing an Introductory Engineering Course a for LaSallian High Schools” LaSallian Huether Conference, Cincinnati, OH November 2010

PUBLICATIONS; MEDIA

Peer-reviewed technical paper based on research in Singapore

“A Modular Approach to Using the Engineering Design Process in Secondary Science Curriculum: Experiences in Singapore and the United States” Proceedings Frontiers in Education Conference (FIE), 2014 IEEE

http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7044428&refinements%3D4228383453%26filter%3DAND%28p_IS_Number%3A7043978%29

Middle/High School project “Engineering Disaster-Proof Housing” on American Society for Engineering Education “Engineering Go for It” website

<http://teachers.egfi-k12.org/disaster-proof-housing/>

Peer-reviewed curriculum for the inclusion of solid state material science in high school chemistry

“Investigation of Material Properties” Materials Education Organization

http://materialeducation.org/educators/matedu-modules/docs/Investigation_of_Material_Properties.pdf

“Micro to Macro: Linking Microstructure to Material Properties”

[http://materialeducation.org/educators/matedu-modules/docs/Micro to Macro.pdf](http://materialeducation.org/educators/matedu-modules/docs/Micro_to_Macro.pdf)

“NCEA Talk” blog – invited contributor

“Maximizing the E in STEM: Engineering, Engagement, Enthusiasm, Empowerment, and Empathy in Your Classroom” June 2017

Self – authored Blogs

ProjectEngin: Bringing the E into Your STEM Classrooms <https://projectengin.wordpress.com/>

KaiserSing: 6 Months in Singapore as a Fulbright Teacher <https://kaisersing.wordpress.com/>

Radio Interviews

Big Beacon Radio – David Goldberg, host <http://bigbeacon.org/2016/10/big-beacon-radio-ep-60-bringing-engineering-design-k-12-interview-projectengins-ann-kaiser/>

Education Talk Radio – Larry Jacobs, host

“Teaching More Engineering in STEM Classes”

<http://www.blogtalkradio.com/edutalk/2016/09/07/teaching-more-engineering-in-stem>

"Incorporating Engineering in STEM Classrooms: A Teachers' Perspective"

<http://www.blogtalkradio.com/edutalk/2016/12/01/incorporating-engineering-into-stem-classrooms>

MEMBERSHIPS

National Science Teachers Association (NSTA)

Rhode Island Science Teachers Association (RISTA)

International Technology and Engineering Education Association (ITEEA)

American Society for Engineering Education (ASEE)

Association for Supervision and Curriculum Development (ASCD)

American Association for the Advancement of Science (AAAS)

International Exchange Alumni/Fulbright Alumni