

Scott Samuelsen, Ph.D.

Professor, Mechanical, Aerospace, and Environmental Engineering
Director, Advanced Power and Energy Program
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Education and Training:

Institution	Major	Degree	Year
University of California, Berkeley	Mechanical Engineering	B.S.	1964
University of California, Berkeley	Mechanical Engineering	M.S.	1965
University of California, Berkeley	Mechanical Engineering	Ph.D.	1970

Professional Engineer, Mechanical Engineering, State of California

Research and Professional Experience:

Jul 70-Present	Professor (Assistant, Associate, Full, and Research), Mechanical, Aerospace, and Environmental Engineering, UCI. Research, Teaching.
Feb 98-Present	Director , National Fuel Cell Research Center
Jul 00 – Present	Director , Advanced Power and Energy Program
Jul 72-Jun 83	Founder and Chairman , Mechanical Engineering, UCI.
Sep 65-Sep 70	Research Scientist , Stanford Research Institute Research in structural response to impulsive x-ray induced loads in a vacuum.
Jun 64 – Aug 65	Research Engineer , Lawrence Livermore National Laboratory Research in initiation of nuclear fission reactions.

Selected Publications (over 250 total)

1. Chen, Q, Rao, A., and **Samuelsen, S.**, “Coproduction of Transportation Fuels in Advanced IGCCs via Coal and Biomass Mixtures,” Applied Energy, 2015, In Press.
2. Shaffer, Brendan, Brouwer, Jacob, and **Samuelsen, Scott**, “Dispatch of Fuel Cells as Transmission Integrated Grid Energy Resources to Support Renewables and Reduce Emissions,” Applied Energy, pp. 178-186, 2015.
3. Tarroja, B., AghaKouchak, A., Sobhani, R., Feldman, D., Jiang, S., and **Samuelsen, S.**, “Evaluating Options for Balancing the Water-Electricity Nexus in California: Part 1 – Securing Water Availability,” Science of the Total Environment, Vol 497–498, pp. 697–710, 2014.
4. Tarroja, B., AghaKouchak, A., Sobhani, R., Feldman, D., Jiang, S., and **Samuelsen, S.**, “Evaluating Options for Balancing the Water-Electricity Nexus in California: Part 2 – Greenhouse Gas and Renewable Energy Utilization Impacts,” Science of the Total Environment, Volumes 497–498, pp. 711–724, 2014.
5. Chen, Q., Rao, A., and **Samuelsen, S.**, “Coproduction of Transportation Fuels in Advanced IGCCs via Coal and Biomass Mixtures,” Applied Energy, Vol. 118, pp. 258-270, 2014.
6. McLarty, Dustin F., Brouwer, Jacob, and **Samuelsen, Scott**, “Fuel Cell-Gas Turbine Hybrid System Design: Part I: Steady State Performance,” Journal of Power Sources, Vol. 257, pp. 412-420, 2014.

7. McLarty, Dustin F., Brouwer, Jacob, and **Samuelsen, Scott**, “Fuel Cell-Gas Turbine Hybrid System Design: Part II: Dynamics and Control,” *Journal of Power Sources*, Vol. 254, pp. 126-136, 2014.
8. Razeghi, Ghazal, Zhang, Li, Brown, Tim, and **Samuelsen Scott**, “Impacts of Plug-In Hybrid Electric Vehicles on a Residential Transformer using Stochastic and Empirical Analysis,” *Journal of Power Sources*, Vol. 252, pp. 277-285, 2014.
9. Eichman, Josh, Mueller, Fabian, Tarroja, Brian, Schell, Lori, and **Samuelsen, Scott**, “Exploration of the Integration of Renewable Resources into California’s Electric System using the Holistic Grid Resource Integration and Deployment (HiGRID) Tool,” *Energy*, Vol. 50, pp. 353-363, 2013.
10. Spang, Brent, Yoshimura, Sayaka, Hack, Richard, McDonell, Vincent, **Samuelsen, Scott**, “Evaluation of the Level of Gaseous Fuel-Bound Sulfur on Fine Particulate Emission from a Low Emission Gas Turbine Engine,” *Journal of Engineering for Gas Turbines and Power*, Vol. 135, No. 3, pp. 031501-1 to 031501-8, 2013.

Synergistic Activities:

1. Member: ASME (Fellow)
2. Principal Investigator on contracts and grants with agencies (U.S. Department of Energy, California Energy Commission, California Public Utilities Commission, U.S. Department of Defense, U.S. Environmental Protection Agency, National Science Foundation, South Coast Air Quality Management District, Air Products) and industrial sponsors (Toyota, General Motors, General Electric, Siemens Power Generation, Parker Hannifin, Southern California Edison, Southern California Gas) that include strategic alliances.
3. With the Chairman of the California Air Resources Board (Mary Nichols), Co-Chair of the California Stationary Fuel Cell Collaborative.
4. Facilitate collaborations with academic, agency, and industry partners to address the paradigm shifts associated with (1) the generation of electricity, (2) building efficiency and the integration of distributed energy resources (DER) into the built environment, and (2) the transformation of the mobility fuel and vehicle markets.
5. Organize and host of the annual International Colloquium on Environmentally Preferred Advanced Generation (ICEPAG), sponsored by the U.S. Department of Energy, and the annual Microgrid Global Summit.