

*“My granddaughter Mira was living in New Delhi India with my son and daughter-in-law. Many days they held her back from going to school because the air-pollution was rated as ‘severe’ by the U.S. Embassy PM2.5 sensor readings. To play in the back garden she had to wear a facemask with a cleanable filter on its side. My role at BECI gives me a chance to change the world for millions – soon billions - of little children like Mira”*

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Professor Paul Wright is the Director of the Berkeley Energy and Climate Institute. He is internationally recognized as a leader in design, 3D printing and manufacturing. His *Advanced Manufacturing for Energy* lab has extensive experience in the design and manufacture of energy harvesting; including devices that utilize thermo-electric generation, vibration energy, thin film solar cells, and electromagnetic sources. 3D-dispenser printing and screen-printing of thin batteries and super capacitors then allow his research team to create self-powered Internet of Things (IoT) nodes with a wide set of performance characteristics. A modeling tool on the performance of harvesters, batteries and supercapacitors allows an analysis of the various load-demand scenarios. Specifically, the duty cycles of the sensor nodes being deployed in any final application are highly variable (varying from energy use in large-scale agriculture, building-energy management, and high-speed automated manufacturing). The modeling tool allows the desired duty cycle to be supported by the size/capability of the on-board storage reservoirs in relation to the harvested energy.

Professor Wright joined the faculty of the Mechanical Engineering Department in 1992 and he holds the A. Martin Berlin Professorship. From 1999 he was an Associate Dean of Engineering; from 2007 to 2013 he was the Director of the Center for Information Technology for Research in the Interest of Society (CITRIS); since 1999 he has been a co-director of the Berkeley Wireless Research Center.

Previously to Berkeley, he held faculty positions at the Courant Institute of Mathematical Sciences at New York University; at Carnegie Mellon University in Pittsburgh PA where he was a co-founder of the now internationally famous Robotics Institute; and at the University of Auckland in New Zealand. He was a postdoc at Cambridge University England and obtained all his degrees at the University of Birmingham England.

He is a member of the National Academy of Engineering, the National Academy of Inventors, a Fellow of both the American Society of Mechanical Engineers and the Society of Manufacturing Engineers. He has authored or co-authored five peer-reviewed books, over 150 archival journal articles, and made presentations at over 150 refereed symposiums and conferences.

<http://ame.berkeley.edu> (Advanced Manufacturing for Energy Lab)

<http://invent.citris-uc.org> (CITRIS Invention Lab)

<https://bwrc.eecs.berkeley.edu> (BWRC)

<https://bcourses.berkeley.edu/courses/1376830/> (Interactive Device Design Class)