

Educating for Innovation: Panelists

Dr. Kim Boyer *U Albany, Founding Dean of the College of Engineering and Applied Science*

Dean Boyer believes strongly that making informed decisions about the complex issues facing our world requires some degree of engineering and scientific literacy. Dr. Boyer is founding Dean of the College of Engineering and Applied Sciences at UAlbany. He has served as Head of the Electrical, Computer, and Systems Engineering Department at RPI and was on the faculty of The Ohio State University for 22 years. As a National Academies Jefferson Science Fellow, he served as Senior Science Advisor to the Bureau of Western Hemisphere Affairs at the US Department of State. Dean Boyer received his B.S., M.S. and Ph.D. degrees in Electrical Engineering from Purdue. He has industrial experience at Bell Laboratories and Comsat Laboratories, and has been a Visiting Professor at the University of Bern, Switzerland, and a Visiting Scholar at the Federal University of Parana, Brazil and the University of Chile. Dean Boyer has published seven books and more than 100 scientific papers, and has lectured in nearly 30 countries.



Dr. Betty Lise Anderson *Ohio State University, Professor of Materials Science and Electrical Engineering*

Program director for Engineering Outreach to K-12, Dr. Anderson and her students have reached more than 100 schools and over 18,000 students, developing twenty different kid-friendly engineering projects such as designing a working speaker from paper, wire, magnets and an audio cable. Dr. Anderson has been at The Ohio State University since 1990. She obtained her MS and her Ph.D. in Materials Science and Electrical Engineering at the University of Vermont. Her technical area is photonics. Dr. Anderson started her career as a teacher at an experimental elementary school. She then worked in industry at Tektronix, Inc., C.S. Draper Labs, and GTE Laboratories. She earned a BSEE at Syracuse University and is a Fellow of the Society for Photo-Instrumentation Engineers and a senior member of the Institute of Electrical and Electronics Engineers and the Optical Society of America.



James Wolfe *Regeneron Pharmaceuticals, Director of Process Sciences*

In 2015, Regeneron was listed by Forbes Magazine as the third most innovative company in the nation. One of Regeneron's strongest ambassadors – Jim Wolfe is committed to STEM education and his enthusiastic, dynamic and engaging style connects with students at every level. Jim is responsible for process validation, supporting full scale process, bioprocess design, chromatography and separations troubleshooting, and process engineering bioreactors. Directing a staff of over 40 employees, Jim leads the way in process and product trending and characterization and in protein chemistry. He has a degree in Biological Sciences from Plattsburgh State University, with a focus on biochemistry.



Michelle Sweeny *Tech Valley High Math Teacher*

Steeped in the principles of project-based learning, collaboration and authentic hands-on projects, Michelle Sweeny is the founding math teacher at Tech Valley High School, now located in the SUNY Polytechnic Institute's Albany Nanotech Complex. Michelle is certified in both physics and mathematics and has significant experience in teaching integrated mathematics and science including AP physics, calculus and math. She has coordinated numerous student projects integrating mathematics, science and technology. Michelle holds a B.S. in physics from Wagner College and a Master's for secondary science education from the College of Staten Island. She served as department chair for science at St. Joseph Hill Academy, Staten Island.



Dr. Heidi Jo Newberg *RPI Professor, Department of Physics, Applied Physics, and Astronomy*

An astrophysicist, Dr. Newberg is known for her work in understanding the structure of our Milky Way galaxy. In 2007, she shared the Gruber Prize in Cosmology along with the members of the Supernova Cosmology Project and in 2011 the group's lead won the Nobel Prize in Physics. Dr. Newberg shared the 2015 Breakthrough Prize in Fundamental Physics with the members of the Supernova Cosmology Project. Dr. Newberg received a bachelor's degree in Physics from RPI and a Ph.D. in Physics from the University of California, Berkeley. She is also the president of the board of trustees of the Dudley Observatory and director of the Hirsch Observatory. Dr. Newberg has published papers in diverse areas of galactic and extragalactic astronomy, including supernova phenomenology, measuring cosmological parameters from supernovae, galaxy photometry, color selection of QSOs, properties of stars, and the structure of our galaxy.

