



## Summer 2009 ESST Workshop Faculty



[Dr. Tanya Furman](#) is professor of geosciences and associate director of the Alliance for Earth Sciences, Engineering, and Development in Africa (AESEDA). She earned a Ph.D. in Geochemistry from Massachusetts Institute of Technology in 1989. Her current research interests include using geochemistry of mafic lavas and phenocrysts to unravel melt generation, segregation and transport processes in the lithosphere and asthenosphere, with particular interest in continental rift zone magmatism and the development and maintenance of mantle reservoirs.

Dr. Furman has developed innovative programs to help increase the number of underrepresented students considering STEM-based careers and has built collaborative partnerships with other institutions that now use her programs. In 2005, Furman received a \$1.5 million grant from the National Science Foundation Program, Opportunities to Enhance Diversity in the Geosciences (OEDG). The grant, \$900,000 of which is administered by Penn State, is entitled "*Building and Maintaining a Pipeline for Diversity*". This is a four-year program that builds upon AESEDA's partnership with Jackson State University (HBCU) by providing longitudinal training, mentoring and support opportunities for students from underrepresented groups to achieve success in the geosciences. Furman collaborated with Jackson State colleagues to assist with the establishment of a department entitled Physics, Atmospheric Sciences and Geosciences. The new curriculum in Earth System Science was approved by the university and the state board of education, and went on line in summer 2007. More information about Dr. Furman may be found at <http://www.geosc.psu.edu/people/faculty/personalpages/tfurman/index.html>.



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**Dr. Laura Guertin** is associate professor of earth science at Penn State Brandywine in Media, PA. She received her BA in geology from Bucknell University and her PhD in marine geology & geophysics from the University of Miami's Rosenstiel School of Marine & Atmospheric Science. Her primary research focus is the effective integration of innovative technologies to improve student learning in introductory-level geoscience courses. She has been awarded Penn State's Commonwealth College teaching award and the university-wide George W. Atherton Award for Excellence in Teaching. In 2003, she was selected as one of Project Kaleidoscope's Faculty for the 21<sup>st</sup> century network for emerging leaders in STEM education. She has presented her pedagogical innovations at local to-international geoscience education conferences and published in journals such as the *Journal of Geoscience Education*, *Journal of Women and Minorities in Science and Engineering*, and the *Journal of Science Education and Technology*. She is currently a councilor with the National Association of Geoscience Teachers and chair-elect for the Geoscience Division of the Council on Undergraduate Research.