Dr. Stassun will discuss The Fisk-Vanderbilt Masters-to-PhD Bridge Program, a successful model for addressing the current magnitude of underrepresentation of African-Americans, Hispanics, and Native-Americans in science and engineering. The program is the top producer of African American master’s degrees in physics, and is the top producer of minority PhDs in astronomy, materials science, and physics. The main features of the program include: (1) discarding the GRE in favor of indicators that are not biased against women and minorities, (2) partnering with a minority-serving institution for student training through collaborative research, and (3) using the master’s degree as a deliberate stepping stone to the PhD. He will show how misuse of the GRE may explain the ongoing underrepresentation of minorities in PhD programs, and will describe alternate methods to identify talented individuals most likely to succeed. Lastly, he will describe his mentoring model which may be utilized to enhance the success of all PhD students.