



Research Experiences for High School and Two-Year College Faculty in Mechatronics, Robotics, and Industrial Automation

Texas A&M University, College Station, TX

June 13-July 22, 2016

<http://hsieh.tamu.edu/ret/>

Texas A&M University will be hosting a National Science Foundation (NSF) Research Experiences for Teachers (RET) site from June 13 to July 22, 2016. This site will provide opportunities for high school teachers and two-year college faculty involved in career and technology education (CATE) to engage in Mechatronics, Robotics, and Industrial Automation research and curriculum development. Activities will include a 6-week summer program at Texas A&M University and continuing collaboration throughout the following academic year. During the summer, participants will:

- engage in a research project with a faculty mentors;
- attend special topic presentations and site tours; and
- develop an instructional module to teach a topic related to their research.

During the following academic year, participants will:

- implement their instructional modules in the classroom and assess learning outcomes;
- attend a 1-day workshop to present results, share materials, and evaluate the program.

Stipend

Each participant will receive a stipend of \$1000/week for participation in the six-week summer program and \$1800 upon completion of the implementation and evaluation activities during the following academic year. Lodging, meal and travel expenses are **not** included. Limited dormitory-style housing in the \$20-30/day range can be reserved if requested on the application.

In addition, one Master Teacher (high school level) and one Master Instructor (two-year college level) will be selected. The Master Teacher and Master Instructor will complete the same activities as the other participants, but will also have a leadership role in the curriculum development process. The Master Teacher and Master Instructor stipends will be \$1200/week for the six-week summer program. All other allowances will be the same as the other participants.

Eligibility

To be eligible for participation in the RET program, faculty should be currently teaching in the following areas: robotics and automation, engineering design and presentation, mechatronics, biotechnology, programming, manufacturing, engineering mathematics, principles of technology, scientific research and design, electronics. Both two-year college and high school faculty are welcome. Institutions are encouraged to send at least two faculty members to the program.

Participants will be selected based on criteria such as interest in research and in developing instructional modules for classroom use, and recommendations by their principals and/or department heads. Instructors from institutions with high percentages of minority and socio-economically disadvantaged students are encouraged to apply. Once accepted, participants may continue their participation in the program for two consecutive years.

How to Apply

Applications are available at: <http://hsieh.tamu.edu/ret/about.html>. Notifications about acceptances will be sent out in late March. If you have questions, please contact the site director, Professor Sheng-Jen ("Tony") Hsieh at hsieh@tamu.edu