

NSF Summer Research Experiences for Teachers (RET) Opportunity for Secondary (grades 7 – 12) Math and Science Teachers on Challenge-Based Learning and Engineering Design Process Enhanced Research Experiences for Middle and High School Teachers

Research Projects Include:

- **Project 1**: "Catalytic Electrode Coatings for Removal of Pesticides from Drinking Water in Ozonation/Electrolysis Treatment Systems"
- **Project 2**: "Identification and Measurement of Metal Complexes in Solutions for Alternative Energy Development"
- Project 3: "Generation of Renewable Energy from Food Waste"
- Project 4: "Enhancing Decision Making Emulating Human Reasoning"
- Project 5: "Reducing Freeway Emission Via Ramp Metering Control"
- Project 6: "Secure Cyberspace"



High Performance Liquid Chromatograph



Ramp Metering System: Simulated and Actual



Reactor Test Vessel For Food Waste

Benefits of being a RET Teacher?

- \$6000 and a laptop for participation in 2015 **RET** Site for the 2015-16 academic school year
- 7-week RET program, from June 15th July 31st including research, coursework, and PD workshops and seminars
- Mentored by a RET Resource Teacher
- Create a Unit that utilizes challenge based learning and the engineering design process
- Participate in professional opportunities presenting at the annual STEM Conference and/or presenting papers at other regional and national conferences

Apply NOW! if you are interested in this tremendous professional leadership opportunity! *Don't miss out*! For more information go to: http://www.ceas3.uc.edu/step/ret/archive/2015/ Email the application packet to: futurescience.uc@gmail.com Application deadline is January 16, 2015. Questions? Contact: Debbie Liberi liberid@ucmail.uc.edu