

Announcing: New Doctoral Graduate Training Fellowships:



Renewable and Sustainable Fuel Solutions For the 21st Century

An NSF-Funded IGERT* Program at Rutgers University

The development of renewable and sustainable fuels is a “grand challenge” of the 21st century.

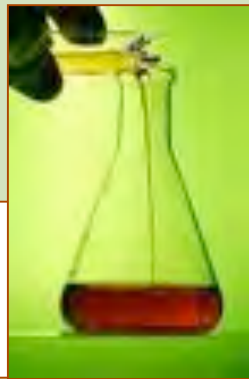
Effective solutions require an integrated approach, bringing together four research foci:



Development and Optimization of New Feedstock Alternatives



Environmental Impact, Land Use, Global & Domestic Sustainability



Improved SynFuel Options, Engineering Systems, Energy Conservation

Economics, Policy, Infrastructure, and Fuel Deployment Logistics



The Sustainable Fuel IGERT Program seeks to recruit outstanding and highly motivated students who wish to pursue doctoral graduate studies at Rutgers in the physical and life sciences, engineering, or social sciences and to study in the areas highlighted above. Our objective is to produce the next generations of leaders in academia, industry and government that will be comprehensively trained in energy issues.

IGERT Graduate Training Fellows will participate in a rich array of integrated educational and training activities that complement their studies in their home graduate program:

- > *Co-mentoring of dissertation research by faculty members from at least 3 disciplines*
- > *New Fuel and Energy courses, Energy Topics Seminar Series, Annual IGERT Symposium*
- > *New Certificate Program in Energy Specialty*
- > *Choices of Industrial, Governmental, and International Activities and Internships*
- > *Generous Stipend and Tuition Remission (1-4 years support)*

See other side for additional program details and information re: eligibility, applications.



Funded by the National Science Foundation IGERT Program.

*IGERT=Integrative Graduate Education and Research Traineeship

Additional support from Rutgers University



PROGRAM ELEMENTS OF THE IGERT PROJECT ON SUSTAINABLE FUELS SOLUTIONS

DOCTORAL GRADUATE TRAINING FELLOWSHIPS[§]	<i>\$30 K/YEAR STIPEND; TUITION & FEE REMISSION SUPPORT FOR OVER 20 FELLOWS, 2009-2013 (>80 STUDENT-YEARS OF SUPPORT)</i>
NEW RESEARCH THRUSTS FOR PHD THESES CROSS-DISCIPLINARY FACULTY ADVISING	<i>DIVERSE RESEARCH OPPORTUNITIES AS HIGHLIGHTED ON FRONT OF FLYER OVER 40 PARTICIPATING FACULTY; BROAD RANGE OF GRADUATE PROGRAMS: PHYSICAL AND LIFE SCIENCES, ENGINEERING DISCIPLINES, SOCIAL SCIENCES</i>
NEW GRADUATE COURSES NEW CERTIFICATE IN ENERGY STUDIES	<i>SUSTAINABILITY OF BIOFUELS INTERNATIONAL AGRICULTURE: NEW CROPS AND USES ALGAL GENOMICS: NEW MODELS FOR BIOFUELS RESEARCH CROSS-DISCIPLINARY DISTINGUISHED SPEAKERS FORUM</i>
COLLABORATIONS WITH 14 RESEARCH CENTERS AND INSTITUTES AT RUTGERS	<i>BIOTECHNOLOGY CTR. FOR AGRICULTURE AND THE ENVIRONMENT; RUTGERS ENERGY INSTITUTE; WAKSMAN INSTITUTE OF MICROBIOLOGY; RUTGERS ECO- COMPLEX; CTR. FOR ENERGY, ECONOMICS, & ENVIRONMENTAL POLICY; 9 OTHERS</i>
INTERNATIONAL FIELD TRIPS AND RESEARCH INTERNSHIPS	<i>BRAZIL: SUGARCANE ENGINEERING; PLANT GENOMICS FOR BIOFUELS CHINA: COMPUTATIONAL MODELING OF SUSTAINABILITY; BIOPROSPECTING; CELLULOSE DEGRADATION AND UTILIZATION SOUTH AFRICA: SYNGAS CONVERSION AND COMMERCIALIZATION; FUEL CHEMISTRY</i>
INDUSTRIAL AND GOVERNMENTAL INTERNSHIPS	<i>CARBOZYME, INC.: PROCESS SCALING AND COMMERCIALIZATION MCGUIRE AIR FORCE BASE: ENERGY MANAGEMENT PLANNING NJ DEP'T. OF ENVIRONMENTAL PROTECTION: BIOFUELS LIFE CYCLE ASSESSMENTS</i>
EXPERIENCE IN TEACHING AND MENTORING	<i>SUPERVISION AND MENTORING OF UNDERGRADUATE RESEARCH FELLOWS "INTRODUCTION TO COLLEGE TEACHING" PROGRAM; ENERGY TEAMS</i>
OUTREACH FOR DIVERSITY, BROADENING PARTICIPATION	<i>BRIDGE PROGRAMS AND PARTNERSHIPS: U. OF PUERTO RICO, VIRGINIA UNION U., DELAWARE STATE U. (& OTHERS, TBD) RUTGERS "RISE" SUMMER PROGRAM FOR UNDERGRADUATES; 4-H MENTORING</i>

HOW TO APPLY

§To be eligible to apply for an IGERT Graduate Training Fellowship you must be:

- A U.S. Citizen or Permanent Resident
- A graduate student in a PhD track at Rutgers University (first-year Rutgers graduate students preferred, but more advanced students and transfer students will also be considered)
- Enrolled in a relevant graduate program, e.g. one in which IGERT faculty participate (currently including but not limited to: Plant Biology, Environmental Sciences, Ecology and Evolution, Biochemistry, Molecular Biosciences, Microbiology and Molecular Genetics, Chemistry and Chemical Biology, Chemical and Biochemical Engineering, Civil and Environmental Engineering, Computational Biology and Molecular Biophysics, Economics, Geography)
- Committed to do research in an area relevant to the sustainable fuel-related themes highlighted on the front of this flyer.

*If you meet these criteria, skip to *******, below. If not, read on:*

If you are planning on doctoral graduate study and thinking of applying to Rutgers:

- Send a brief email to Eric Lam, Fuels IGERT Program Director, (lam@aesop.rutgers.edu) simply stating your preliminary (and non-binding) interest. We will send you an inquiry form so we can advise you about appropriate Rutgers graduate programs, your options in the interim, and to allow us to notify you when our new IGERT website is up and running.

If you are already a graduate student at Rutgers, but not eligible for an IGERT Fellowship:

- Many IGERT program offerings will also be open to students not receiving Fellowships, e.g. new IGERT-developed courses and IGERT-sponsored seminars/symposia in the near future, as well as the new Certificate in Energy Studies. Send an e-mail with your contact information to Prof. Eric Lam, IGERT Program Director, (lam@aesop.rutgers.edu), so you can receive further information.

*****If you are an eligible graduate student at Rutgers:**

- Send an e-mail to Prof. Eric Lam, IGERT Program Director, (lam@aesop.rutgers.edu), indicating your potential but non-binding interest in applying. We will notify you when our website is functioning and application materials are available (mid-fall 2009). The application deadline will be March 1, 2010. The Admissions Committee will communicate its decisions on or about April 1, 2010. Stipend support will commence July 1 2010. Fellowship appointments are for 12 months and may be renewable for 1-3 additional years, contingent upon suitable progress in both home graduate program and IGERT-required activities.



"The goal of the Sustainable Fuels Solutions IGERT is to prepare experts to shape America's future energy economy, by providing education in biotechnology chemistry, ecology, engineering, and energy policy, along with global exposure and real-world experience in government and industry."

***-Professor Eric Lam,
-Program Director, Sustainable Fuels IGERT***