



Green Team Pushes a Number of Campus Initiatives

The Green Team, the student club sponsored by the Lyle Center, has articulated an ambitious agenda for advancing environmental awareness and sustainability at Cal Poly Pomona University. Boasting an active membership of over thirty students, including participants from all Colleges on campus, the Green Team serves as Cal Poly Pomona’s Environmental Justice Network, striving to build Environmental Awareness and promote Social Justice through Green Campus Initiatives.

One current initiative of the Green Team is an effort to provide organic produce, grown by students, to the university community. *Pomona Organics* is being organized by Green Team members in partnership with the Lyle Center, the College of Agriculture, Foundation Dining Services, and the Collins School of Hospitality Management. *Pomona Organics* hopes to begin growing organic produce for the campus community this spring.

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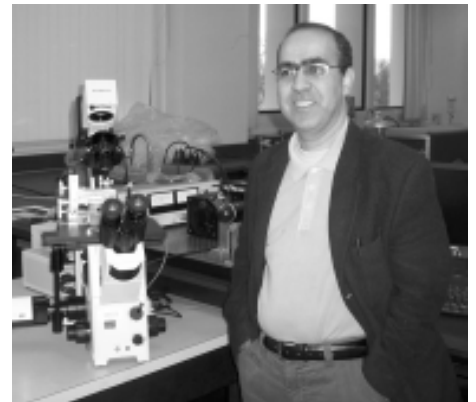
Pomona Organics hosted an event to honor Land which will be used to grow produce. The ceremony was facilitated by the Costanoan Rumsen Carmel Tribe.

Dr. Ahmadzadeh & Dr. Phillips Named Lyle Center Faculty Fellows for 2006-07

The Center has named **Dr. Hossein Ahmadzadeh** and **Dr. Jon C. Phillips** as Faculty Fellows for 2006-07.

Dr. Ahmadzadeh, an Assistant Professor in the Department of Chemistry, is developing a method for the analysis of the fatty acid content of biodiesel fuel. Biodiesel is a renewable fuel alternative to petroleum-based diesel, which is derived from vegetable oil. Vegetable oil used may consist of recycled cooking oil or unused oil extracted from a variety of plants, including microalgae produced from the treatment of sewage waste. Proponents argue that biodiesel maintains performance standards while eliminating carcinogens found in petroleum diesel emissions. The Lyle Center has been producing and using this renewable fuel in its diesel vehicles since 2004.

Fatty acids are important precursors in the synthesis of fuels for energy production. In order to obtain a final biodiesel product with desirable and reproducible quality, the fatty acid content of the biofuel must be monitored carefully by the appropriate selection of experimental conditions and analytical methods. Gas Chromatography Mass Spectrometry is the most commonly used analytical technique for the analysis of fatty acids, as it is able to effectively separate the fatty acids from the other components in the biodiesel fuel. However this process re-



Ahmadzadeh.



Phillips.

quires an additional chemical reaction to convert the fatty acids to a form suitable for analysis. Dr. Ahmadzadeh has proposed two alternative analysis techniques, High Performance Liquid Chromatography and Capillary Electrophoresis, as a means for eliminating the additional chemical reaction, while still being able to effectively separate the fatty acids from the biodiesel mixture. If successful, these innovations in testing may allow for expansion of high-quality biodiesel production.

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Hands-on learning in Dr. Charles Ritz's Solar Energy course.

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Dr. Ahmadzadeh has been a member of the Cal Poly Pomona faculty since 2005. He received his Ph.D. in analytical chemistry from the University of Alberta, and previously held research positions at the University of Minnesota, York University and Target Discovery, inc. He is the author of numerous publications, including several on Capillary Electrophoresis analysis.

Dr. Phillips is an Assistant Professor in the Department of Food Marketing and Agribusiness Management. He is analyzing resources for sustainable agricultural development in the high desert region of San Bernardino County, California. The uninhabited areas north of the Cajon Pass are experiencing significant urban development pressure. However, alternative uses, such as agricultural production may be possible, particularly high-value crop production. High-value crops include certified organic products, which are produced without synthetic fertilizers, synthetic pesticides, genetically modified organisms, sewage sludge, or irradiation. Biodynamic production is another growing trend in high-value crops. Biodynamic agriculture seeks to bring about balance and healing of the environment through integrating crops and livestock, recycling nutrients, maintaining soil and the health and well-being of crops and animals.

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The Fellowship will allow Dr. Phillips to conduct an inventory of resources within the high desert region to assess the feasibility of high-value agricultural production. This work builds on Dr. Phillips' previous research developing such inventory methods. The study will evaluate agro-ecological resources, labor supply, institutional and physical infrastructure, access to markets and supporting industries, and various forms of capital resources. Special attention will also be paid to the infrastructure for marketing produce locally through roadside stands, farmers' markets and community supported agriculture, a concept where community members pledge to cover anticipated costs of farm operation. In return, they receive shares in the farm's bounty throughout the growing season, as well as satisfaction gained from reconnecting to the land and supporting local food production.

Dr. Phillips has been a member of the Cal Poly Pomona faculty since 2002. He received his Ph.D. in agricultural economics from Michigan State University. He also received an MBA from Wayne State University, an M.A. in economics from West-

ern Michigan University, and a Bachelor of Business Administration from the University of Michigan, Ann Arbor. He is a member of the International Food and Agribusiness Management Association, the American Agricultural Economics Association, the Western Agricultural Economics Association, the Food Distribution Research Society, and the Raisin Administrative Committee. He is the author of numerous journal articles and technical reports related to agricultural firm management. He has made more than twenty research presentations at regional, national, and international conferences. In addition to his professional activities, Dr. Phillips enjoys hiking in the mountains with his wife and son.

This is the third year of the faculty fellowship program, which supports Cal Poly Pomona faculty research that furthers the mission of the Lyle Center and leads to peer review publication or exhibition. Lyle Center Fellows are required to present their work in an informal seminar. Information about Dr. Ahmadzadeh's and Dr. Phillips' seminar presentations will be announced later this year.



Dr. Rick Willson facilitating discussion in the Methods and Applications course.



Dr. Jerry Mitchell lecturing in RS 302.

Lyle Center News and Notes

Lyle Center faculty member and former Director, **Dr. Ron Quinn**, recently co-authored a book entitled *Introduction to California Chaparral*, published by the University of California Press. The book seeks to provide basic information about the chaparral plant community and encourage a greater understanding and appreciation of its beauty, complexity and resiliency....Architecture Professor **Irma Ramirez** once again led an effort to design and construct information kiosks in a Tijuana community this past fall, as part of *Habitat 21's* efforts to forge partnerships with local communities in that city. The work was funded by the Center and included students from her upper division topic studio in the Architecture program.....An MSRS graduate class on Methods and Applications is studying greenhouse gas emissions associated with the operation of Cal

Poly Pomona University. The course, taught by Lyle Center Director **Dr. Kyle D. Brown** and **Dr. Rick Willson** (URP) is attempting to inventory current emissions and explore regenerative approaches to reduction and/or mitigation of emission levels.....Lyle Center Site Technician **Juan Araya**, recently harvested wood from a Paulownia tree at the Center. This fast-growing tree is known for its hardwood, which is commonly used in the making of musical instruments. ENV Instructional Support Technician, **Linc Hoke** will be making a mandolin from the wood harvested by Araya....A number of MSRS students attended the Annual Bioneers Conference in San Francisco last fall....the Green Team hosted a showing of the documentary *An Inconvenient Truth* on campus last October. The event featured a panel discussion with a number of Cal Poly Pomona faculty, including Lyle Center fac-

ulty members **Dr. Pablo La Roche** and **Dr. Jerry Mitchell**....Lyle Center Director **Dr. Kyle D. Brown** was appointed by the California State University System Academic Senate to a sub-committee on sustainability education and research. The sub-committee is exploring connections between efforts to make CSU campus operations more sustainable and expanding sustainability education and research....Lyle Center Faculty Fellow, **Dr. Graciela Brelles-Marino** presented her Fellowship work in a public seminar on February 8th. She spoke about biological nitrogen fixation in plants....The Center is co-sponsoring a "Global Emergency Teach-in" event on campus on February 20th. The event aims to promote ecological literacy in design education and carbon neutrality on campuses. It features a live web-cast from the New York Academy of Sciences.

MSRS Students Bring Wide-Ranging Expertise to the Center

Fall, 2006 marked the third year of our Master of Science program in Regenerative Studies. This unique program prepares students to solve environmental problems facing our global society in the 21st century. Nine new students entered the program this past fall. This energetic group brings a range of backgrounds and interests. This group includes the following:

Stephanie Armetta Clements is a licensed landscape architect and a Cal Poly alumna, with a professional background in energy conservation and land management. She has received awards from NASA and the Department of Energy for water conservation and land management practices. She is interested in research that will guide development and management of green cemeteries.

Heidi Rusina is Owner/Operator of the multidisciplinary design consultancy: *Hiru Studio*. She has an extensive background in hospitality interior design, project management and cultural tourism. She is a LEED AP interested in landscape ecology, avian conservation, and regenerative technology for ecotourism and industrial design.

Azita Rezvan has a Master in Architecture from Iran, her home country. She is interested in sustainable architecture, and hopes to conduct research that guides energy efficient architecture, urbanism and its policies. She is also interested in designing the sustainable architectural prototypes, especially as low cost shelters.

Jennifer Strouse has a background in herbal medicine and is interested in designing therapeutic plant gardens specific for

residential and community needs. She hopes to conduct research that will lead to further development in agroecological landscapes.

Zora Tucker has a BA in Anthropology from the New College of Florida and has worked as an educator and an organizer. She has also studied at the Ecosa Institute for Sustainable Design. She is interested in the intersections of social and environmental justice. She hopes to research and participate in the creation of place-based, culturally-relevant ecological education.

Talat Yalcin is a landscape architect from Turkey who is interested in developing new approaches and innovative solutions for sustainable development. He believes the Center is ideal for exploring solutions to futuristic problems by providing access to local, national and international experts.

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A second initiative focuses on increasing the use of biodiesel on campus. Green Team members are advocating the use of a diesel blend with 20% biodiesel fuel for the University's bus fleet, heavy machinery, farm equipment, and trucks. They are currently working on efforts to educate the campus community about the benefits and feasibility of biodiesel.

Increased recycling on campus is a third important initiative. The Green Team partnered with Facilities to enroll Cal Poly Pomona in this year's *Recyclemania*, a friendly competition among college and universities. Over a 10-week period, campuses compete to see which institution can collect the largest amount of recyclables per capita,

the largest amount of total recyclables, the least amount of trash per capita, or have the highest recycling rate. The goal is to increase student awareness of campus recycling and waste minimization. Cal Poly Pomona is one of only three CSU campuses participating in *Recyclemania* this year.

The Green Team also sponsors a number of events across campus, designed to build partnerships and raise environmental awareness. They have an established film and discussion series, which debuted last Fall with the showing of *An Inconvenient Truth*. They sponsor bi-weekly community dinners at the Lyle Center, which bring together students, faculty and staff interested in environmental issues. And this coming spring

they will once again sponsor the Lyle Center's annual Earth Day celebration.

For more information about the Green Team and their initiatives, please visit their web site: www.csupomona.edu/greenteam/

50th anniversary celebration
Department of Landscape Architecture
Cal Poly Pomona University
April 23-28, 2007
The week includes a Career Day reception, events at the Lyle Center, and a 50th Anniversary Gala.
Help us commemorate the history of the department and the achievements of its numerous alumni.
Event information at: www.cppla50.com.



Spring Classes@the Center

These courses are open to non-RS graduate and/or undergraduate students, as well as the broader community through open university. Contact the Center for more information.

RS 303: Organization for Regenerative Practices. 4 units. Dr. Lisa Nelson.
Investigation of sustainable organizing processes for regenerative practices. *Meets G. E. Area C4, or D4 Synthesis requirement.*

RS 450: Sustainable Communities. 4 units. Dan Yuhasz, Instructor
Historical survey and cross cultural study of sustainable communities. *Meets G. E. Area C4 or D4 Synthesis requirement.*

RS 499: Ecological Patterns and Processes. 4 units. Dr. Kyle D. Brown.
Introduces students to principles in the emerging field of landscape ecology, and their relationship to sustainable planning and design.

RS 499/499L: Biodiesel Basics. 4 units Juan Araya, Instructor
Provides an overview of biodiesel, an alternative to petroleum-based diesel fuel. Course will cover basic chemistry of biodiesel refining, as well as current issues with biodiesel production and use..



John T. Lyle Center for Regenerative Studies
California State Polytechnic University, Pomona
4105 W. University Drive
Pomona, CA 91768-2562

Kyle D. Brown, Ph.D., Director

Phone: 909.869.5155
Fax: 909.869.5188
email: crs@csupomona.edu
www.csupomona.edu/crs



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