

Summer 2011

## Go! Green Outreach, Summer 2011

University of Arkansas, Fayetteville. Division of University Advancement

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# GO! Green Outreach

SHARING SUSTAINABILITY NEWS, EFFORTS AND IDEAS WITH THE PEOPLE OF CAMPUS

VOL 4 • ISSUE 4 • SUMMER 2011

## Summer Sustainability

It's hot out there if you haven't noticed yet! And if your A/C bill is going through the roof, you may be looking for other ways to go green and be mindful of your pennies.

A blog from the Taiga Company offers a cool green guide to an eco summer. Discover ways to host a "green" party or cook-out. Find tips on making over your house in an eco-friendly way. Get some ideas for keeping your family busy. You can even learn about eco-friendly car washing and personal care.

Check it out by clicking [here](#).

## Small Footprint, Literally and Figuratively



Small Footprint, an exhibition by Szilvia Kadas, was exhibited at the University of Arkansas Fine Arts Center Gallery, April 26 – May 5, 2011. Kadas is a candidate for a Master of Fine Arts degree in Graphic Design. Her exhibition featured an array of designs for packaging and print media.

For the exhibition, Kadas created a showcase in the style of a small neighborhood food store, offering viewers solutions to reduce their everyday impact on the environment. Small Footprint encourages the public to help build an active green community by becoming more environmentally conscious consumers.

A portion of this exhibition was made possible by special arrangement with Ozark Natural Foods ([ozarknaturalfoods.com](http://ozarknaturalfoods.com)).

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# iPhone App Simplifies Going Green at Home

*Researchers tracked power-generated devices and individual appliances*

Technology just made being “green” easier. Computer science researchers at the University of Arkansas and University of San Francisco have developed an automated energy-management system that monitors energy generation and consumption in off-grid and grid-tied homes that use solar energy or wind power. As part of the system, an iPhone application warns homeowners of critical battery situations, suggests appliances to turn on or off, recommends ideal times to execute tasks that require greater power and adjusts power states of devices to reduce energy consumption.

Nilanjan Banerjee, assistant professor of computer science and computer engineering at the University of Arkansas, Pat Parkerson, associate professor of computer science and computer engineering at the University of Arkansas, and Sami Rollins, professor at the University of San Francisco, installed a suite of monitoring tools in an off-grid, solar-powered home in Fayetteville, Ark. The researchers collected generation and consumption data for 55 days, 14 days during the summer of 2010 and 41 days in November and December of 2010. In addition to monitoring power-generation devices of the photovoltaic system, their system also tracked individual appliances, including a refrigerator, washer and dryer, hot-water heater and even a



television and lamps.

Data collected by the monitoring system demonstrated important findings. First, energy harvested from the solar panels and energy consumed by the house were both highly variable. This was true within a single day, across several days and across seasons. Although generation and consumption varied greatly, they did so in a predictable manner.

Second, the study demonstrated that traditional energy-management techniques are insufficient in off-grid homes. The widespread assumption is that the ideal time to run appliances that require a lot of energy is between 7 p.m. to 7 a.m. However, the researchers discovered that considering the state of the battery, it was better to run appliances during the day – 10 a.m. to 8 p.m. Finally, the data showed that manual and reactive techniques do not prevent critical battery situations. The homeowner in the study was conservative with energy consumption and carefully monitored battery voltage. Still, he had to rely on a backup generator approximately 25 percent of the time because he could not predict times in which harvesting solar energy was low.

To learn more about this project, go to the System Support for Green Homes webpage.

## Two Wheels are Better than Four!



Each spring, the Bicycle Coalition of the Ozarks encourages workers to save gas, eliminate parking hassles, get exercise and be earth-friendly all at the same time by swapping cars for bikes on the way to work.

This year's Bicycle Commuter Challenge was held during the week of May 16-20 in which businesses in the Northwest Arkansas area compete for the highest percentage of bicycle commuters. The coalition conducts this competition during National Bike to Work Week to both reward the employees who bicycle commute and to raise awareness about the viability of bicycle commuting as a way of life. This competition included a special University of Arkansas division for campus departments. Throughout the competition, Intramural/Recreational Sports Department provided free locker room amenities including lockers, showers, and towels for bicycle commuters during this week.

“University Recreation had six out of 20 people commute at least one day that week, which was 30 percent,” said Katie Helms, assistant director, Intramural/Recreational Sports. “There were 255 bike commuting miles logged that week.”

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## Peer Review: JMU Eco Communities

The Madison Eco Community at James Madison University in Harrisonburg, Va., is a residential learning community designed for 20 first-year students who want to explore environmental issues and how to live more sustainably on the planet. Students in the community live in the same residence hall, take several classes together, develop outdoor skills through weekend nature and recreational activities, and participate in community projects and field trips. All majors, including undecided students, are welcome. The goals of the Madison Eco Community are to help its members:

1. Understand and communicate effectively about environmental sustainability through critical thinking, analysis, writing, and public speaking.
2. Develop a personal environmental ethic through formal and informal reading, discussion, introspection, and outdoor recreation.
3. Engage in meaningful change that reflects more sustainable lifestyle and community practices.
4. Explore environmental careers based on each individual's interests and major.
5. Build outdoor skills through such opportunities as camping, canoeing, hiking, orienteering, and geocaching.
6. Connect to JMU student clubs that are environmentally-focused.

Learn more here: <http://www.jmu.edu/orl/involved/madisoneco.html>

# Disciplines Converge to Explore Sustainable Housing, Planning



In architecture and planning, a development must go beyond environmental considerations to be truly sustainable. It also has to balance with social and economic aspects.

Carl Smith, assistant professor of landscape architecture in the Fay Jones School of Architecture at the University of Arkansas, is teaching an interdisciplinary course on sustainable development this summer, “Housing as if the Future Mattered.”

In broad terms, sustainable development is “a manmade intervention on the land that provides for the needs of the current generation while allowing future generations to meet their own needs,” said Smith. “In effect, that means it has to balance not only being economically viable — which is usually the reason for development to occur — but it also has to balance ecological capacity with social equity. And when you balance those three, that’s when you have sustainable development.”

“How many Americans live is a very good example of unsustainable development because it doesn’t balance the needs of the people with

ecological considerations,” Smith said.

Smith created this course so students could consider these problems and devise possible solutions through alternative housing designs. As driving a car becomes increasingly expensive, “a more compact, walkable city makes good sense,” he said.

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Five students in the disciplines of architecture, landscape architecture, interior design and crop, soil and environmental sciences took this course last summer.

Smith said that designers work better by working collaboratively because it’s impossible for individual design disciplines to master everything. “There’s just too much to know, unless

you want to deal with things in a very shallow, facile way. But if you do that, then it’s very unlikely you’re going to produce anything that’s sustainable — ecologically or socially,” Smith said. “So, collaborative working is a must for sustainable design.”

To read more about collaborative, sustainable design, visit <http://newswire.uark.edu/Article.aspx?ID=16089>.



## Bookstore Offers Text Book Recycling

At the end of the semester, many students make a beeline to the bookstore to sell their textbooks for some spending money. But what about the books that are no longer being used on campus and not eligible for buyback? Now, thanks to a partnership between the University Bookstore, Associated Student Government and the Office of Campus Sustainability, unwanted and unused books can be “recycled” into trees.

The University of Arkansas Bookstore served as a collection point for any textbook or library books that will no longer be used on campus.

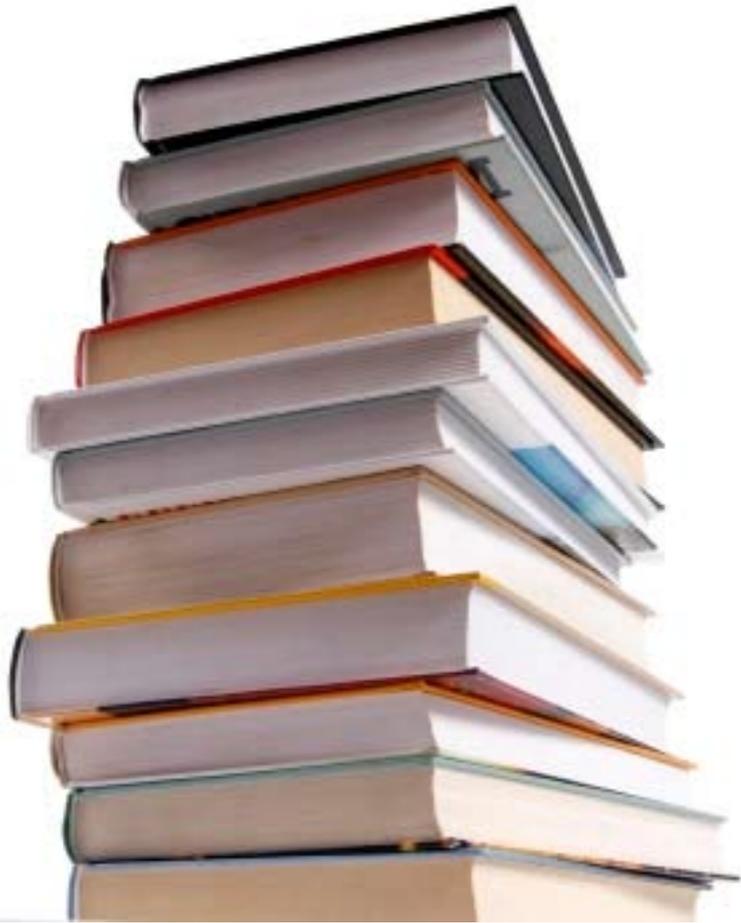
Upon collection, the unwanted books were shipped to Book Drives Inc., and then sorted for worldwide marketplace sale and recycling.

As the books are sold, a percentage of the gross sale price will be returned to ASG to as-

sist in its campus sustainability goals. For each item sold, Book Drives Inc., will fund the planting of at least one tree through the non-profit group Trees For The Future.

The bookstore also collect un-wanted CDs, DVDs, Blu-Ray, video games, cell phones, laptop computers, MP3 players, gaming consoles and PDAs.

“This program is just another important step toward neutralizing the University of Arkansas’ carbon footprint,” said campus sustainability director Nick Brown. “It also provides a much-needed resource for our campus community for the responsible disposal of unwanted and unneeded books and electronics. It’s truly a win-win situation for the campus, and the environment.”



## Sustainability Minor

The University of Arkansas will begin offering an undergraduate minor in sustainability for students, who may declare the minor as early as Aug. 15.

In spring 2010, Provost Sharon Gaber appointed professor Stephen Boss, director of the university’s environmental dynamics doctoral program, to lead a faculty committee representing each college and school as well as the Associated Student Government president to develop a curriculum for a sustainability minor. Their work resulted in a proposal that received approval from the Arkansas Department of Higher Education.

“It was the intention to create a minor accessible to every University of Arkansas student regardless of discipline, yet still have meaning and academic identity as a minor in sustainability,” Boss said.

The 2011-12 Catalog of Studies describes the purpose of the minor in sustainability as providing foundational knowledge and skills related to the emerging discipline of sustainability.

# Engineering Students Think Forward ... Planet Forward

*Winners of online contest featured on national TV*

For some exceptional College of Engineering students, online voting resulted in national coverage of their outstanding work on a Planet Forward Earth Day special April 8. Their research project, which involves designing and building a device that can convert algae into fuel, will help clean up pollution and reduce dependency on fossil fuels.

Planet Forward, a project of the Center for Innovative Media at George Washington University, features ideas about energy, climate and sustainability on its website and through television specials, which air on public television stations across the country. Planet Forward describes its Earth Day special as “the culmination of our current cycle on energy efficiency.” In an online contest, participants submitted ideas to increase energy efficiency. Out of the 1024 ideas submitted, only 22 were nominated for voting. The University of Arkansas won the contest with 1558 votes, and Columbia University’s chapter of Engineering Without Borders placed second with 1056 votes.

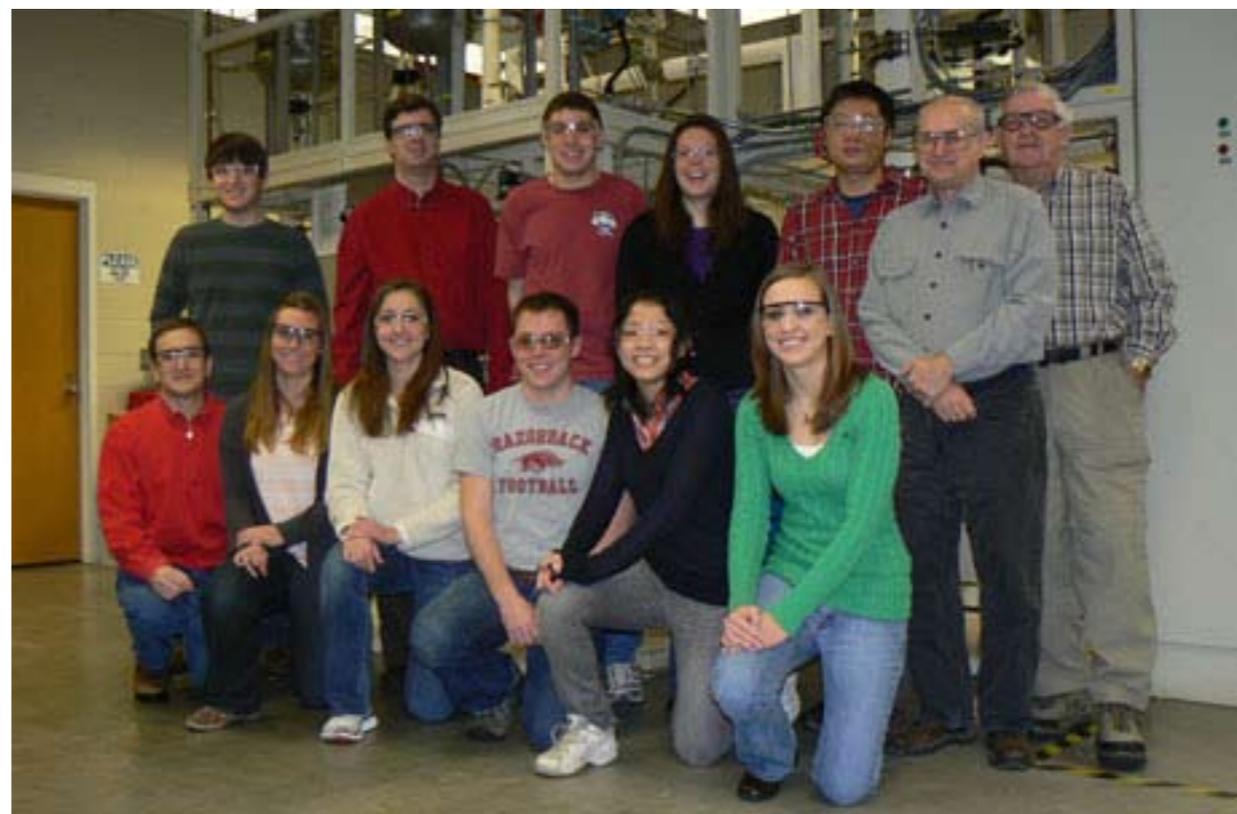
The University of Arkansas project focuses on using algae to produce biofuels such as butanol. Algae, which grow quickly in streams and ponds, can be used to remove pollutants such as nitrogen and phosphorus from the water and then be harvested to make clean-burning biofuel. In addition, the leftover plant material can be used as fertilizer.

Led by faculty adviser Jamie Hestekin, and co-advisers Bob Beitle and Roy Penney, the students are designing a bio-fuel miniprocessing unit, a machine that can turn algae and other biomass directly into fuel. Their device, which will be

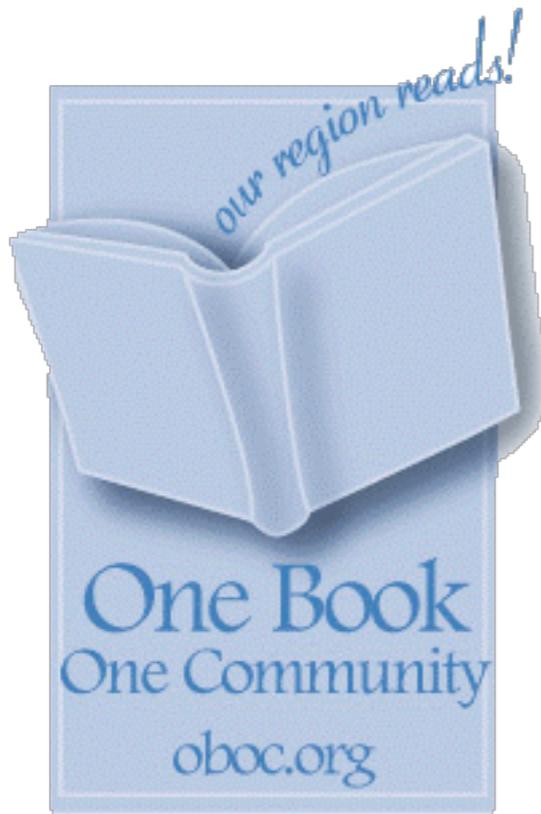
small enough to fit in the back of a pick-up truck and will produce a few milliliters of fuel-grade butanol at a time, could serve as a model for larger applications of this technology. For example, a larger machine based on this model could be used by farmers to turn plants directly into fuel for farm equipment.

“The projects that the students are working on could allow Arkansas to make a big impact in energy independence in this country,” said Hestekin.

Twelve students have taken part in this project. Five of the undergraduate students will be incorporating the project into their honors theses, and Ali McAtee has received a grant from the Honors College to support her work with this project.



# One Book/One Community Pick for Fall Has Sustainability Focus



No Impact Man, by Colin Beavan, has been selected for the fall 2011 One Book, One Community project. The book, published in 2009, is the story of Beavan's attempt, with his wife, daughter and dog, to live an entire year with "limited / no impact" on the environment.

"The One Book committee wanted to find a book for next year that could tap into students' concern about the environment, the university's and community's sustainability efforts, and the new

sustainability minor on campus that will be launched in the fall semester," said Kevin Fitzpatrick, Jones Chair in Community for the department of sociology and criminal justice in the J. William Fulbright College of Arts and Sciences, and co-chair of the One Book, One Community committee. "We received a number of really excellent suggestions from the campus and the community, and I think we've found a book that will educate, entertain and stimulate some lively discussion among those who read it."

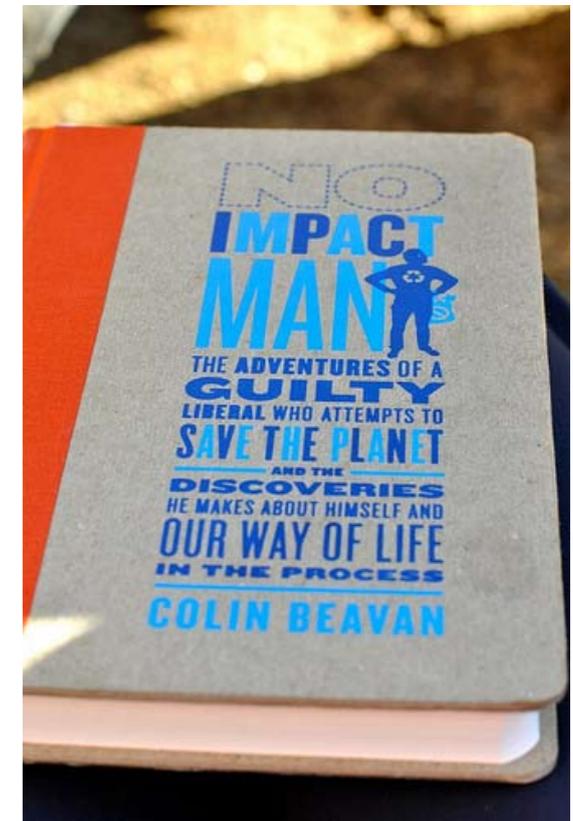
The full title of Beavan's book, No Impact Man: The Adventures of a Guilty Liberal Who Attempts to Save the

Planet, and the Discoveries He Makes About Himself and Our Way of Life Along the Way, offers a taste of Beavan's tone and writing style, as well as providing a succinct summary of the topic.

In 2006, Beavan decided to stop complaining about global warming and see if he and his family could live sustainably in New York City. Among his goals were to produce no trash, use no petroleum products, eat only locally produced food, and stop buying new products. He chronicled their trials, errors and successes in a blog, which eventually drew national attention, including a documentary film about the experience.

Students in the fall English Composition course and several other classes will read, discuss and write about No Impact Man as part of their course assignments.

Colin Beavan will visit Fayetteville Oct. 27 and 28 to speak with students and faculty, deliver a public lecture, and meet with local book club members at the Fayetteville Public Library.



# Sustainability Council - May Meeting

Below are highlights from the spring meeting of the University of Arkansas Sustainability Council was held from 3:30-5 p.m., May 24 in the Executive Board Room of Willard J. Walker Hall.

- ASG Report – Emily Crossfield, a biological sciences student, will be the new chair of the Associated Student Government’s sustainability committee. She had served on the committee last year and is moving to chair for the 2011-12 academic year.
- State of the Campus – An annual report of sustainability accomplishments being drafted by the office of sustainability and will be provided to the UACS at the July meeting for review. It will quantify energy savings, recycling totals and other sustainability initiatives.
- Sustainability at U of A publication – Larry Driver is working on a draft of a publication illustrating the breadth and depth of sustainability programs, research efforts and initiatives that have been conducted across campus. He will be completed in July. The publication will provide contact information for each entry.
- Compost project – Currently, the only food waste being composted in the earth tubs at the University of Arkansas Farm comes from the breakfast and lunch meals at the Northwest Quad. The working group will continue to assess and look for alternative means to supplement the program.
- Facilities management is in the conceptual design stage for doing work to botanically enhance the riparian zone along Mullins Creek and to aid the flow and keep foot traffic away from creek to reinforce the banks to alleviate erosion from Leroy Pond to Lot 56. This will eventually call to move the sidewalk. Designs may be available later this year.
- Campus community garden – Kurt Rom gave an overview of previous iterations of community gardens on campus and the idea for a new one was expressed.

The next meeting will be held 3:30-5 p.m. July 19, 2011, in Willard J. Walker Hall 504.

Do you have ideas for  
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