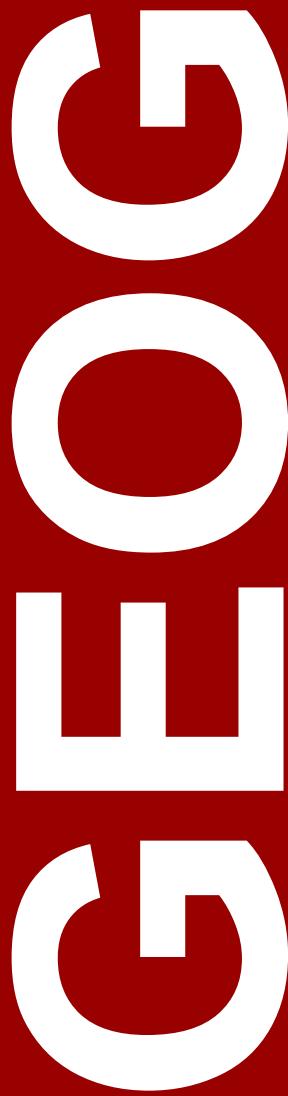


geography

THE GRADUATE SCHOOL OF GEOGRAPHY AT CLARK UNIVERSITY



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HERO REFLECTIONS FROM CLARK UNDERGRADS

GISDE STUDENT PROFILE

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Or visit the Geography site!

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.....Deborah Martin
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Questions or comments about the newsletter?
Email Colleen Dolan at CDolan@clarku.edu

find us





welcome

Greetings from Director Anthony

It has been a remarkable year in the Graduate School of Geography at Clark. Our number of undergraduate majors increased again, there is record interest in our 5th Year Masters in GIS, twelve PhD's were granted last academic year (making it 33 since Fall 2010), our doctoral students won twelve national and international fellowships and sixteen additional national and international awards, and interest in our joint GIS, Development and Environment MSc program is sustained. Over the first eight months of 2012 members of our faculty were awarded over \$ 1 million in research grants, and since 2010 they have brought \$4.24 million in research grants to Clark. This level of faculty activity is stunning. Just as a comparison, Williams College's website boasts that with their 320 faculty, "Between July 1, 2009 and June 30, 2010, grants and awards for faculty research at Williams totaled \$4.3 million." Clark Geography's *seventeen* faculty took only three years to win in grants what Williams' *three hundred and twenty* faculty won in one. I recently told our Provost that a large part of my job is "trumpet-blower-in-chief," and it is true: what our School of Geography achieves with limited resources is a small miracle. It is also central to Clark's agenda in Liberal Education and Effective Practice. These grants, which come from federal agencies, foundations, NGOs and research councils, allow our undergraduates and post-graduates to become involved in faculty research in Worcester, Massachusetts, urban America, the Arctic, Greenland, Antarctica, the Rockies, South America, Africa and India, as well as in GIS and Earth Science labs.

So to our loyal alumni, you can rest assured that GSG

faculty are working on all pistons to keep your and our GSG unique. Meanwhile for those of you who are new to Geography, as well as to those who are returning, this is a very warm welcome to what I am confident will be one more remarkable year. I encourage you to make the most of the very special resources that we have to support your own learning and your own journeys through Clark. If you take a look at the articles in this newsletter you will get an insight into how other students have been able to thrive in this environment.

For those of you coming back you will also see some changes. First, we are joined by a new member of faculty, Dr. Alex Gardner, an expert in glaciers and their impacts on sea level rise and water resources, remote sensing and Earth system modeling. He is also a contributing author of the upcoming Intergovernmental Panel on Climate Change's Fifth Assessment Report. Alex joins us from the University of Michigan and brings our faculty specializing in GIScience, quantitative spatial analysis, and Earth System Science to eight. Second, some of you may notice changes to our building. Together with CUGA we have created a small meeting space for our majors on the ground floor and a GIS help desk in our front office; we have carved out a new office on the main floor (Professor Gardner had to sit somewhere); and we have continued to spruce up our graduate student spaces.

All this takes massive effort from everyone - our staff, our students, our faculty - and this is a moment to thank them for all they do to make this such a special place.

reminders»



NESTVAL

The New England-St. Lawrence Geographical Society Conference will be held on October 19th and 20th at the University of Maine at Farmington. The theme is "Connecting Communities Near and Far," but presentations of any topic of interest to the membership are encouraged.

FOR MORE DETAILS »
www.nestval.org/

AAG

Anyone interested in the advancement of geography may participate in the annual AAG conference. You are eligible to give a presentation or participate in other capacities in the program provided you are registered for the meeting. You do not need to be an AAG member to register. The call for papers ends **October 24th**.

FOR MORE DETAILS »
www.aag.org/cs/annualmeeting/call_for_papers

COLLOQUIA

In Fall 2012, Geography initiated a colloquium series with a talk by Dr. James Wescoat of MIT. Colloquia are held at 4:15pm on Fridays, and the remaining colloquia this semester will be on:

October 19
November 2
November 16

FOR MORE DETAILS »
www.clarku.edu/departments/geography/news/events/index.cfm

different student different research

GRADUATE SCHOOL OF GEOGRAPHY

Meet the nine newest graduate students of 2012

elisa arond

Elisa worked for Oxfam America on fair trade and the Social, Technological and Environmental Pathways to Sustainability Research Centre, University of Sussex. Her research interests include grassroots and formal processes for technology innovation, sustainable development and social inclusion, Fair Trade and similar product certification systems, campaigns and sustainability education. She is also interested in alternatives to drug production and artisanal gold mining in Colombia. Elisa received her BS in Biology at UMass Amherst, and her MSc in Science and Technology for Sustainability from the University of Sussex, UK.

juan luis dammert

Juan Luis was the Coordinator of the Program on Citizenship, Social and Environment Affairs at the Peruvian Society for Environmental Law, and Assistant Professor at the Catholic University of Peru. His research interests include the interactions between conservation and development in the Peruvian Amazon in relation to booms in illegal resource extraction, poverty and large scale infrastructure investments. Juan Luis received his BA in Sociology from the Catholic University of Peru.

ali m. santacruz delgado

Ali is broadly interested in the application of geospatial technologies and Earth observation data in the modeling of natural/human system interactions. His experience has been focused on land change applications, but he is particularly interested in understanding the theoretical and mathematical foundations of modeling procedures. Ali received his BS in Forest Engineering from the National University of Colombia at Medelin, and his MS in Geomatics from the National University of Colombia at Bogotá.

arthur elmes

Arthur is broadly interested in biogeographical applications of GIS and Remote Sensing. His particular interests focus on invasive species distribution modeling, agent-based modeling and the effects of disturbance on ecosystem functioning. Arthur received his BA and his MA in Geography from West Virginia University.

fernando hernandez espino

Fernando has earned a LASPAU-Fulbright Fellowship. He was a Research Assistant and Lecturer in rural development at the University of Michoacan, Mexico. His research interests include land grabbing in Mexico and its implications for food security, sustainability and the environment, with a political ecology focus. He has prior work experience in development in Mexico. Fernando received his BA in Economics at the Universidad Michoacana, and his MA in Rural

Development at East Anglia University.

young-long kim

Young-Long's research interests include economic geography, Korean and global knowledge networks, regional disparity, and quantitative methods. He is interested in pursuing a research topic that examines the significance of knowledge in regional economic development in emerging economy contexts. His MA thesis analyzed academic citation data since 1980 and implications in regional industrial growth. Young-Long received his BA in Economics and his MA in Geography — both from Seoul National University.

richard maclean

Richard has primary interests that focus on the spatial analysis of ecological phenomena. He is also interested in political geography and its impacts on ecology. His MS thesis research was an investigation of abiotic nitrogen retention in Harvard Forest soils, and he has multiple publications in prep stemming from his this research. Richard received his BA in Biology from Western Washington University and his MA in Natural Resources from the University of New Hampshire.

nathan mietkiewicz

Nathan is strongly interested in furthering an understanding of how (1) environmental setting, disturbance regime, and land use affect treeline distributions; and (2) climate impacts the establishment and growth of tree species across climatic regimes. He received his BS in Earth Sciences at the University of Maine, and his MA in GISDE from Clark University.

kristen shake

Kristen's MS thesis focused on ocean acidification and the carbonate system in the Gulf of Alaska and Prince William Sound. She is interested in applying her polar environmental science experience to explore how science can inform future policy decisions in the changing Arctic environment. She is particularly interested in the interface of human-environment dimensions in the Arctic with respect to extractive industries and ecosystem services. Kristen received her BS in Geography-Environmental Studies and her MS in Chemical Oceanography — both from the University of Alaska, Fairbanks.

RECENT GEOGRAPHY GRADUATE STUDENT AWARDS

RECENT GRANTS AND FELLOWSHIPS

STUDENT	FACULTY	AGENCY
Fernando Hernandez Espino	Deb Martin and Dianne Rocheleau	LASPAU-Fulbright
Lisa Stoddard	Jody Emel and Deb Martin	Pruitt- Society for Women Geographers
Melanie Vanderhoof	Chris Williams	NASA- ESS Fellowship
Oona Morrow	Deb Martin	NSF- DDRI
Miles Kenney-Lazar	Jody Emel	SSRC
Adrienne Johnson	Tony Bebbington	SSHRC
Nick Cuba	John Rogan	NASA-NESSF
Luke Trusel	Karen Frey	NASA-NESSF
Alex Sphar	Jim Murphy	NSF-DDRI
Emily Gallagher	Dianne Rocheleau	BELT
Emily Gallagher	Dianne Rocheleau	NSF-DDRI
Emily Gallagher	Dianne Rocheleau	Fulbright-Hays DDRI
Jill Williams	Deb Martin	NSF-DDRI
Rory Horner	Yuko Aoyama	NSF
Seth Schindler	Yuko Aoyama	NSF
Ed Harris	Deb Martin	NSF
Connie Johnston	Jody Emel	NSF

RECENT STUDENT AWARDS

STUDENT	AWARD	AGENCY
Nick Cuba	10 th Annual Clark University Graduate Student Research Award	Clark University
Danielle Fontaine	AAG Transportation Specialty Group 2012 Thesis Award	Association of American Geographers
Katherine Foo	Summer Doctoral Public Policy Fellowship	Rappaport Institute, Harvard Kennedy School
Connie Johnston	Harvard Science and Technology Studies Fellowship	Harvard Kennedy School, Harvard University
Adrienne Johnson	LDPI Summer Research Grant	Land Deal Politics Initiative
Miles Kenney-Lazar	SSRC Dissertation Proposal Development Fellowship	Social Science Research Council
Bill Kutz	Proposed Research Award	American Institute for Maghrib Studies
Pheakkdey Nguon	Participation: 2012 Young Scientists Summer Programs	International Institute for Applied Systems Analysis
Pheakkdey Nguon	Guest Presenter	University of Arizona & UNEP's Programme of Research on Climate Change Vulnerability, Impacts and Adaptation
Kangping Si	Student Travel Award	US-IALE & University of Rhode Island's Coastal Institute
Alex Sphar	CLAG Field Study Award	Conference of Latin Americanist Geographers
Melanie Vanderhoof	Best Student Presentation	AMS

geography faculty updates

New research grants, January-August 2012

LATEST NEWS

Professor Chris Williams recently published a paper on droughts in the American West in the journal *Nature*. He communicated elements of that paper as an Opinion piece in the NYTimes, during an interview with Tom Ashbrook on NPR's On-Point, and in the NYTime's Dot Earth Blog maintained by Andrew Revkin. This work also initiated a local TV news spotlight with New England Cable News.

Professor Dominik Kulakowski was featured in an article titled "Fighting Western wildfires: Does Forest Service have enough air power?" in the *Christian Science Monitor*, which addressed the issues related to the recent wildfires across the West Coast.

Professor Dominik Kulakowski was awarded the 2012 *Hodgkin's Junior Faculty Award*.

Professor Jim Murphy was awarded the 2012 *Oliver and Dorothy Hayden Junior Faculty Fellowship*. Professor **Deb Martin** was the recipient of this award last year.

FACULTY	TITLE	AGENCY	START DATE	CLARK AWARD
Anthony Bebbington & John Rogan	Mapping Overlaps between Extractive Industries, Water and Agriculture in Ghana and Peru	Oxfam America	Jan-12 ends april-13	49,908
Anthony Bebbington	Research and Knowledge Mobilization on the Extractive Industries: Institutionalizing a Cross-Regional Network	Social Sciences and Humanities Research Council	Aug-2012	17,356
Karen Frey	Satellite observations of sea ice variability and primary production in the Pacific sector of the Arctic Ocean (Lead PI)	National Oceanic and Atmospheric Association	Sept-12 ends 2013	36,980
Karen Frey	Collaborative Research: The Distributed Biological Observatory (DBO) – A Change Detection Array in the Pacific Arctic Region (PI)	National Science Foundation	Aug-12 ends 2017	201,016
Karen Frey	Collaborative Research: Investigating the Influence of Sea-Surface Variability on Ice Sheet Mass Balance and Outlet Glacier Behavior using Records from Disko Bugt, West Greenland (PI)	National Science Foundation	Aug-12 ends 2015	184,872
Colin Polsky	Collaborative Research: Understanding the Factors that Influence Outdoor Residential Water Conservation: A Case Study in suburban Boston (Co-PI)	UMASS Center for Agriculture	Jul-12	20,000
Gil Pontius & Colin Polsky	Collaborative Research: Plum Island Ecosystem (PIE) LTER Site Renewal	National Science Foundation	June-12	143,000
John Rogan & Deb Martin	REU Site: Mapping Beetles, Trees, Neighborhoods, and Policies: A Multi-Scaled, Urban Ecological Assessment of the Asian Longhorned Beetle Invasion in New England (HERO)	National Science Foundation	May-12 ends apr-15	329,992

SUMMER RESEARCH

PHOTOalbum GEOGRAPHY PROFESSOR YUKO AOYAMA

Professor Yuko Aoyama travelled to India over the summer for her research in economic geography »

Professor Aoyama spent five weeks this summer in Bangalore, India conducting research on her NSF-funded project, "The Global Shift in R&D Alliances: Multinational Enterprises (MNEs) and the quest for the 'Base of the Pyramid' (BOP) markets." The project was conceived during her preliminary research trip back in 2007, where she found MNEs and NGOs were beginning to forge partnerships to conduct innovation specifically targeted for the poor, in such areas as education and telecommunications.

The objective of this research is to understand a new institutional mechanism of collaborative governance between for-profit and non-profit entities based on 'shared value'. Her project focuses primarily on MNEs active in the field of information technologies, health (medical devices) and energy. Another focus of the study is the NGOs with experiences of collaborations with MNEs that go beyond corporate social responsibility initiatives (CSR). Overall, the research team interviewed over 40 MNEs and NGOs, including firms such as Microsoft Research Lab (shown in photo), Hewlett-Packard, Siemens, Philips, Dell, General Electric, Google, Yahoo!, and IBM. Her team is currently working on two articles, one that illustrates the transformation of the innovation-for-the-poor ecosystem in India 2007-2012, and another on global economic governance and the emergence of global public goods. The project also represents an international collaboration between Clark and IIITB, fostering an intellectual dialog between academics in USA and India on global forces that shape emerging economies.

Besides Professor Aoyama, the research team was comprised of Prof. Balaji Parthasarathy, ICI Associate Professor at the International Institute of Information Technology Bangalore (IIITB) and Dr. Niveditha Menon, a postdoctoral fellow for the project, also at IIITB. Rory Horner and Seth Schindler (Ph.D. Candidates, Clark University) served as research assistants for the project.

Professor Aoyama will return to India over the next two years to conduct additional field research.



This photo was taken in front of Dell India



This photo of the research team, from left to right: Rory Horner, Niveditha Menon, Ph.D. (Postdoctoral fellow of the project), Seth Schindler, and Prof. Balaji Parthasarathy with Professor Aoyama.



At the Microsoft Research Lab

CLARK ALUMNUS RECEIVES NATIONAL HONOR

Richard B. Erickson, B.A. 54, M.A. '59, has been elected to the prestigious College of Fellows of the American Institute of Certified Planners. Mr. Erickson received his training in geography at Clark and began his very long career in the emerging field of regional planning in 1958. For 37 years of his career he served as the executive director of the Southeastern Connecticut Regional Planning Agency/Council of Governments. Since retiring from full-time practice in 1998, he has worked as a planning consultant. He currently is serving as the interim executive director of the Southeastern Connecticut Enterprise Region, which deals with economic development.

Election to the College of Fellows is the highest honor bestowed by the American Institute of Certified Planners. Fellows are so honored for consistent distinguished service to the planning profession and to society as a whole. Mr. Erickson was cited for four major accomplishments achieved under generally difficult circumstances:

- Persistent and effective advocacy for public sector planning;
- Exceptional leadership in successfully responding to southeastern Connecticut's major economic crisis of the 20th century;
- A high level of success in creating regional agencies to implement planning recommendations;
- A very positive and long-term role as a mentor to staff members and other planners.

Erickson was nominated for election to the College of Fellows by the Connecticut Chapter of the American Planning Association. Chapter president Jason Vincent said of Erickson's career: "His resume demonstrates not just his mastery of the values and principles of planning but shows that he was a pioneer on numerous issues. His leadership in addressing these always led to the best solution possible being identified, pursued, and realized. Throughout his career his work has been of a consistently superior quality. The products of his efforts frequently were recognized as models to be followed by other regions or communities." Erickson is believed to be the only Clark geography graduate to be honored by election to the College of Fellows of the American Institute of Certified Planners.

Mr. Erickson credits his education at Clark and the ethic of public service that he gained here with much of his professional success. He now lives in Norwich, Connecticut with his wife, Marcia. M.A. '59, The couple met at Clark's Graduate School of Geography in 1956.

NEW ALUMNI BOOKS

Julie Urbanik, Geography Ph.D. 2006, recently published: *Placing Animals: An Introduction to the Geography of Human Animal Relations* (Rowman & Littlefield 2012).

As Julie Urbanik vividly illustrates, non-human animals are central to our daily human lives. We eat them, wear them, live with them, work them, experiment on them, try to save them, spoil them, abuse them, fight them, hunt them, buy and sell them, love them, and hate them. *Placing Animals* is the first book to bring together the historical development of the field of animal geography with a comprehensive survey of how geographers study animals today. Urbanik provides readers with a thorough understanding of the relationship between animal geography and the larger animal studies project, an appreciation of the many geographies of human-animal interactions around the world, and insight into how animal geography is both

challenging and contributing to the major fields of human and nature-society geography. Through the theme of the role of place in shaping where and why human-animal interactions occur, the chapters in turn explore the history of animal geography and our distinctive relationships in the home, on farms, in the context of labor, in the wider culture, and in the wild.

Julie Urbanik is now an assistant teaching professor in the Department of Geosciences at the University of Missouri, Kansas City.

UPDATES

Daniel Weiner (B.A. 1979; M.A. 1981; Ph.D. 1986) has been appointed Vice Provost for Global Affairs at the University of Connecticut. Dan will lead the Office of Global Affairs, which includes study abroad, international student and scholar services, global partnerships, fundraising, global education curricula and area studies support. As Vice Provost he will also work with faculty to build and support international research teams, establish a Global Services Program featuring capacity building projects with partner institutions and produce a UConn Strategic Internationalization Plan.

Dan will continue his research on an NSF funded project that is exploring climate change adaptation in the Mt. Kilimanjaro region of Tanzania, and is thrilled to return to New England 26 years after leaving Clark University!

Paul Robbins, Geography Ph.D. 1996, became Director of The Nelson Institute for Environmental Studies at the University of Wisconsin-Madison campus in April 2012. The Nelson Institute for Environmental Studies promotes interdisciplinary scholarship, which aims to understand and address societal problems related to environment and sustainability.

Tim Hudson, Geography Ph.D. 1980, became Chancellor of Arkansas State University (ASU) at Jonesboro in May of 2012. As Chancellor, Dr. Hudson plans to help make ASU an institution which will bring innovative research, world-class faculty, and real-life solutions to each classroom.

A paper published by a Clark graduate recently won the "Best Paper in Image Analysis and Interpretation" award in *Photogrammetric Engineering and Remote Sensing*. The lead author, Joe Fortier was a Geography Major, HERO Fellow and MA GIS student. He now works in Washington DC for Arctic Slope Regional Corporation. The article was co-authored by Clark's Dan Runfola and Curtis Woodcock at Boston University. The article citation is: Fortier, J., Rogan, J., Woodcock, C., Runfola, D.M., (2011). Utilizing temporally invariant calibration sites to classify multiple dates of satellite imagery. *Photogrammetric Engineering and Remote Sensing*. 77(2), 181-189.

Placing Animals

AN INTRODUCTION TO THE GEOGRAPHY OF HUMAN-ANIMAL RELATIONS



— Julie Urbanik —

ALUMNI REPORTS

Professor William Koelsch received his M.A. degree from the Graduate School of Geography in 1959 and his Ph.D. in history from the University of Chicago in 1966. He was visiting assistant professor of geography, Spring 1963 and returned in 1967 as Assistant Professor of History and Geography, retiring as Professor Emeritus, in 1998.

Those alumni who were fellow graduate students in 1957-59 or were at Clark in 1963 and 1967-98 may be interested in what I've been doing since retiring to California in 1998...

In this (usually) pleasant Mediterranean climate, I live in a condo in San Diego. The building is surrounded on two sides by palm trees — two of them outside my windows. Across the street and elsewhere in the city the jacarandas produce their lovely purple blossoms from April until June, and other flowering plants flourish through the year. You might assume, then, I'd become a Sybarite after retiring.

Not so. My scholarly output since 1998 adds up to seventeen articles or book chapters, a couple of review essays, and assorted book reviews and other short pieces. In addition, my Clarkson lecture (1984) on the Freud-Jung visit of 1909 was translated into French and published in book form in Paris in 1999. I also prodded Princeton into observing the bicentennial of the birth of America's first professionally trained geographer, Arnold Guyot, in 2007, and wrote a short piece on him for the Geosciences Department newsletter. My next publication will be an article on "The 'Legendary' Rediscovery of George Perkins Marsh" in the October

Geographical Review.

The big news, however, is that last summer I had published a major book, *Geography and the Classics: Unearthing Historical Geography's Forgotten Past*, # 8 in the Tauris Historical Geography series. It incorporates material I used for my classes at Clark, my research in archival collections in Britain and the U.S., and some earlier unpublished conference papers. The ten chapters cover both Britain and America from the expeditions to Greece sponsored by the Society of Dilettanti from the mid-eighteenth century, on to Clark geographer Ellen Churchill Semple's *The Geography of the Mediterranean Region: Its Relation to Ancient History* (1931). I added a short Epilogue reviewing some recent material and including my experience in teaching courses in this area at Clark.

Since 1998 I've made four trips to Europe. Three of these were as a lecturer for the American Geographical Society's Program of Educational Travel. Two were Mediterranean small-ship cruises and another a Mosel-Rhine-Main-Danube river cruise. I usually go over early for these, or stay on later. Before the river cruise, for example, I spent a week in a wing (now a hotel) of the Renaissance palace of the former Dukes of Nassau-Weilburg, using it as a base to explore points of interest in the beautiful Lahn river valley, as well as hearing a concert in the ducal chapel. (I've never been one for "roughing it"). The fourth was a private visit to Prague, Saxony, Thuringia and Hesse during the 250th anniversary of the death of Johan

Sebastian Bach. Needless to say I heard a lot of good music, including being one of the first Americans to hear the new "Bach organ" installed in the Thomaskirche in Leipzig, where Bach is buried. I also lectured on an AGS cruise from Halifax to Savannah, which gave me a chance to revisit some favorite cities.

Here in San Diego, I set up my second new archives, at St. Paul's Episcopal Cathedral. I've also sat in on a couple of courses in German and two in art history at our local community college, which gave me a chance to mingle with undergraduates again without the chore of either teaching or grading papers. I regularly attend and often give papers at the annual meeting of the Association of Pacific Coast Geographers (APCG), though I regret I don't often see Clark geography alumni living in the region at them. For me they offer an opportunity to stay connected professionally, to try out new ideas, and to support their work in subsidizing student attendees.

At last year's APCG meeting in San Francisco, I was fourth in what began as a lightly attended session. I was both surprised and pleased to see people flood the room to hear my paper. Some even had to sit on the tables in the back. Now in my eightieth year, in what Oscar Wilde called "the august serenity of old age," it's been gratifying to find that one's professional colleagues appear to think there's some life in the old dog yet. ”

Best regards,
Bill

CLARK university GEOGRAPHY association

Announcing a GIScience Help Desk:

The Clark University Geography Association (CUGA) and the Graduate School of Geography recently revealed a new service available to students: a **GIS Help Desk!**

This service began as an idea from undergraduate geography major and CUGA Co-President, Joey Danko '13, who thought it would be useful for students to have a go-to place for their basic GIS software issues. The Help Desk has been a success so far, largely due to Joey's creative thoughts and suggestions, as well as to the skills and experience of the GIS Help Desk Assistant, Yelena Finegold.

Yelena is an undergraduate senior majoring in Geography. She is planning to complete the 5th year master's in GISci.

Yelena's experience includes research abroad at University of Helsinki, Finland. Yelena worked in the Geography Department as a junior researcher for the Climate Change Impacts on Ecosystem Services and Food Security in Eastern Africa (CHIESA) project. Her role was working with the land use and biogeophysical information team to process GIS data and conduct analysis on land use change patterns. Yelena was also the Teaching Assistant for an Introduction to GIS course with her Finnish professors.

Yelena also gained field work experience as a GIS intern at Iracambi Research Center in Minas Gerais, Brazil. There she worked on conservation projects for connecting forest corridors in Brazilian Atlantic Forest. Her tasks as GIS intern included land management planning projects, maintaining and improving the existing GIS data sets, assisting researchers and volunteers with access to the



information on the Iracambi GIS database, making the GIS database user friendly, leading field work excursions to collect data from GPS coordinates, and completing an independent GIS research project.

She is skilled in ArcGIS, IDRISI, Google Earth, and MS Excel. All of these programs are available on the GIS Help Desk Computer, located in the Geography Main Office (Room 220 in the Jefferson Academic Center).

Help Desk hours are:

Wednesdays	2:30-5:00 pm
Thursdays	10:30-2:30 pm
Fridays	12:00-3:00 pm

Students are required to schedule an appointment for Help Desk Assistance. Sign ups are first come, first serve (students can [sign up here](#) for individual help.) We hope that interested students will take advantage of this service, as it's a great opportunity to get a little additional help.

Any questions, requests for appointments, or any changes/cancellations can be addressed directly to Yelena at yfinegold@clarku.edu.

GRADUATE SCHOOL OF GEOGRAPHY ► alex gardner

>> Professor Alex Gardner came to us from the University of Michigan where he spent two years working in the Department of Atmospheric, Oceanic and Space Sciences as an NSERC research fellow. His research interests focus on measuring and modeling changes in the Earth's cryosphere (frozen surfaces) with a particular interest in quantifying glacier contributions to sea level rise.

As an Earth Scientist, Alex's research straddles the disciplines of Engineering and Geography. He has an undergraduate degree in Civil Engineering but migrated to Earth and Atmospheric Sciences for his PhD because he felt that he could apply his skills to study more "relevant" and "far-reaching" scientific questions. In particular, he is drawn to the discipline by a desire to improve our understanding of how humans modify the Earth's climate. Alex is excited to build upon GSG's strong

reputation and said that his number one reason for joining the department was for the opportunity to work alongside a dynamic, highly respected, and intellectually stimulating cohort of faculty and students.

Alex moved to Clark with his wife Tara and two and a half year old son Finnley this July. They are now settling in their new home in Worcester's West Side. Alex is a world traveler, hiker and snowboarder. He has visited over 20 countries in South East Asia, South America and Europe. He is looking forward to hiking some of New England's many backcountry trails and teaching his son to ski at the local hills. <<



Professor Gardner's Office Hours for the Fall 2012 semester are:

[Monday: 10:00am-12:00pm
Friday: 3:00pm-5:00pm]

GEOGRAPHIC INFORMATION SCIENCE FOR DEVELOPMENT & ENVIRONMENT

>> Julia Lenhardt, GISDE (U.S.) graduated from McGill University in 2009, where she earned a B.Sc. in Earth Systems Science. During her time at McGill, she researched the accuracy of precipitation data predicted by the Fourth Assessment Report of the IPCC, and traveled to Tanzania to study the effects of gold mining on rural communities. In 2011, she worked as an intern at Clark Labs and researched the possible causes of drought in the Amazon. She also volunteered on the REC's YouthGrow organic farm in downtown Worcester. Her research interests include climate change modeling, Remote Sensing, and environmental applications of GIS.<<

>> Julia's decision to enroll in the GISDE program likely stemmed from an internship opportunity that she was given by Professor Ron Eastman. Julia spent five months working as an intern in Clark Labs under the direction of Professor Eastman. She spent her time there learning about and applying teleconnection and time series analyses to real events. In March of 2011, while Julia was still interning at Clark Labs, a major earthquake struck Japan, generating a huge need for high resolution maps of the ground. The

julia lenhardt

Japanese government called Clark Labs (knowing that it is a GIS-based institution) and asked if they could provide maps. Julia worked tirelessly with others in Clark Labs to provide three maps to the Japanese Government that showed villages before and after the earthquake. These maps were to be used by rescuers on the ground in Japan. Julia's research and work was applied to something very real, and this experience helped her to realize that she was going into the right field.<<





human-environment regional observatory

Reflections from HERO 2012 Research Fellows

The Human-Environment Regional Observatory (HERO) is an undergraduate research program located at Clark University, which includes approximately ten students each year from Clark and other programs across the nation. The purpose of HERO is to bring graduate-level research to undergraduate students, giving them an opportunity to work closely both with people in their institution as well as outside policymakers and stakeholders. The focus of the current HERO research is on the infestation and eradication of the Asian Long horned Beetle (or ALB; an invasive wood-boring insect that is a severe threat to trees in New England). This year, four of the HERO fellows came directly from our own undergraduate Geography department. We asked them to take a moment to reflect on their experiences from their research this past summer, and here is what some of them had to say:

“

I spent my summer as a HERO research fellow at Clark. As a part of the Beetle Impact Assessment team, I focused on understanding the ecological impacts of the Asian Long-horned Beetle (ALB) infestation in Worcester and the surrounding area. I worked with undergraduates, graduate student mentors, and faculty to assess the change in tree canopy cover from 2008-2010, use satellite imagery to derive the land surface temperature in Worcester and the surrounding area, and investigate possible explanations for tree cover change. We found that in many situations, tree canopy cover loss is correlated to areas of land surface temperature increase.

I found the HERO program especially valuable due to the collaborative and multidisciplinary approach to the research question. This experience provided me with exposure to carrying out all aspects of a research project including conducting background research, assessing and selecting a sufficient methodology, preprocessing data, analyzing results, and presenting results to a broader community. Our lab work was supplemented by field trips including a trip to the United States Department of Agriculture's (USDA) invasive species lab and a tour of tree cutting sites due to ALB in the Worcester Area. These trips allowed for a full understanding of the broad context within which the HERO work fell.



Further, not only did I learn how to process and analyze Landsat satellite imagery and use the imagery to derive land surface temperature, but I also saw the impact of our results on the broader stakeholder community. Our project was in collaboration with stakeholders including federal and state agencies, local politicians, and NGOs, and complements the ongoing research by these interest groups. At the end of the summer, we presented our results to the Clark community and separately to stakeholders. The latter summit proved beneficial as we were able to jointly develop questions for further research.

The results of the summer work serve as the building block for my honor's thesis. I will use Landsat and Aster data to accurately map fluctuations in temperature from 2007-2012 at different scales. Then I will assess possible explanations for changes in temperature. ”

-Martha Ziemer





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I spent my summer working as a HERO researcher examining the impact of the Asian Longhorned Beetle (ALB) infestation on the physical environment, politics and society of the Worcester area. In order to assess this impact, the HERO program used two different methodologies: one based around quantitative methods and the other based around qualitative methods. I was part of the team, called the Beetle Impact Assessment group, that used remote sensing and geographic information systems (GIS) to produce validated measures of tree cover loss and the environmental impact in the ALB quarantine zone.

My experience at Clark definitely helped prepare me for this research. My GIS professor for two semesters, Marco Millones, did an excellent job teaching me so that I had the necessary analytical tools and mapmaking abilities to approach this project. My research methods class with Professor Colin Polsky and my senior research project with Professor John Rogan pushed me to think critically when presenting and writing research, which also proved to be beneficial on my work this past summer.

The most exciting aspect of this research has been the interdisciplinary work between the technical and social fields of geography, and the remote sensing results. Professor John Rogan and Professor Deb Martin, both from Clark's Graduate School of Geography, did a great job integrating their specializations, remote sensing and place-making, into one tremendous research project. It was very interesting to be able to attack the same research objective from two different perspectives, share experiences with the other research stream during the process, and then be able to give a joint final presentation at the end of the summer. With respect to the remote sensing findings, one of the most interesting facts was the distribution of tree loss causes. We found that there was a 2% tree cover loss between 2008 to 2010, in which 31% can be attributed to ALB-related tree loss, 7% can be attributed to the 2008 ice storm, and 62% can be attributed to residual causes (such as development). As a resident of the Worcester area, the most surprising statistic here is the 7% tree loss due to the 2008 ice storm. If my memory serves me right, the 2008 ice storm was devastating. So to be able to say that the ALB-related tree loss was more than four times larger the ice storm damage just shows how much of an impact this invasive species has had on this area.

Moving forward, I hope to be able to continue to do interdisciplinary work now that I am back at Clark. Combining the

theories in two different fields to answer one research question was a great way to approach such a complicated issue. While I will have the opportunity to continue this HERO work on the ALB impact for the next two semesters, I would like to continue to incorporate both the technical and social fields of geography in my future research based on how successful this collaboration was this summer.

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-Joey Danko

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I spent this summer studying the Asian Longhorned Beetle (ALB). This beetle was found in Worcester in 2008 and has established a large and thriving population here. Since then, the United States Department of Agriculture has felled more than 30,000 trees in Worcester and the surrounding towns. This summer my research team talked to stakeholders about what this loss of trees meant for people: what it felt like, looked like, and the effects that it's had on both individuals and the city as a whole. We conducted, transcribed, and coded 20 interviews from which we learned extensively about the story of ALB in Worcester, the value that trees hold for people, the city's ecological vulnerability, the strength of the community, the new networks that have formed between stakeholders, and the resilience of Worcester.

I learned invaluable skills about writing interview questions, gaining people's trust and talking to them, and analyzing the interviews using qualitative data software. I found, though, that the most rewarding part of my summer was getting to know Worcester better. Because the research was so local, I learned not only how to get around and navigate the city, but I also got an inside peek at the inner workings of Worcester city government, and a real sense of the character of the city I've lived in for three years.

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-Shannon Palmer





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