Over the past dozen years or so a number of talented Mexican graduate students in pursuit of their doctorates have come to the Department of History at UC San Diego to work with me and my Latin Americanist colleagues in their studies, and to have me direct their dissertation research. Many such accomplished young scholars from Mexico go elsewhere, as well: to other campuses in the UC system, but also to other American universities (Chicago, Harvard, Yale, Columbia, Wisconsin) and abroad (Paris, London, Oxford). The ones with whom I have worked have all come with the support of liberal fellowships from Mexico’s Consejo Nacional de Ciencia y Tecnología (CONACYT) and UC MEXUS to study the history of colonial and nineteenth-century Mexico, and they have worked in the areas of economic, political, and cultural history. One has remained to make his career in a U.S. academic setting, one already has a professorship in a prestigious institution in Mexico, and two are presumably returning there to make their careers after they finish their studies.

UCSD Professor
Eric Van Young

Claudia Pérez Maldonado, 2004 Cohort
Biomedical Engineering, UC Davis

UC Davis has filed a patent application to safeguard an invention by UC MEXUS-CONACYT Doctoral Fellow Claudia Pérez Maldonado that may allow the disabled to control a wheelchair and other electronic devices using the "ear wiggler" muscle.¹ The University applied for a patent last year when it saw her invention’s potential for developing new and more efficient human-computer interfaces to give the disabled the ability to control many computerized electronic devices, from video games to educational gadgets and wheelchairs to prosthetic limbs.

The initial inspiration for Pérez Maldonado’s project came from one of her co-advisers, Anthony Wexler, a professor in the departments of Mechanical and Aeronautical Engineering; Civil and Environmental Engineering; and Land, Air, and Water Resources. Wexler possesses the somewhat unusual ability to wiggle his ears. The responsible auricularis superior muscle is one of the few that even those disabled with the most extensive spinal cord injuries can control voluntarily, as the brain activates this muscle directly via a particular cranial nerve rather than the spinal cord.

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Photo courtesy of Claudia Pérez Maldonado

Claudia Pérez Maldonado places electrodes from her invention over the “ear wiggler” muscle (auricularis superior) to see if her test subject can use the muscle to move a computer mouse or cursor.

As Pérez Maldonado explains, when muscles receive an order from the brain to contract—to bend an arm, lift a foot or wiggle an ear—they generate electrical signals. She found a way to detect those signals in the auricularis superior muscle and, using mathematical tools and digital signal processing, succeeded in converting the signals into two distinct orders or channels. Additionally, she found that the ratio between those two channels could encode even more distinct orders. After testing the idea in a specially designed simulation, she concluded that the electrical impulses of the auricularis superior muscle could be used to code and transmit information to control electronic devices such as a computer or a wheelchair. Next, she designed the software for transferring signals from the brain via the muscle to a cursor and a computer mouse. The final challenge was to test the entire system on real people to see if they were capable of moving this little-used muscle. Her human subjects quickly picked up sufficient skill to move a cursor around a computer screen and to control a mouse to click icons on the desktop.

Currently, she is translating this technology into a system to operate an electronic wheelchair, which would eliminate the need for a mouth-controlled joystick. She intends to connect her software first to a simulation model and, when she finds that the system performs correctly, to a real wheelchair. The system contains safety mechanisms that include emergency stops and an ultrasonic sensor that decreases the speed of the wheelchair as it approaches objects.
they worked, no one in her family considered higher education to be an option. Initially, her schooling was interrupted in junior high school, when her family needed her to work. For more than four years she worked in a bakery, even training to be a pastry chef, but her mind craved greater stimulation. She enrolled in adult school to complete her high school studies and was admitted to Universidad Autónoma Metropolitana de México (UAM) to study biomedical engineering. She had to study twice as hard as her cohorts, she says, because of the gaps in her education, which left her ill-prepared for the complexity of the work. Four years later, despite these hurdles, she graduated at the top of her class and earned a medal of academic merit. Later, a graduate study career fair in Mexico City introduced her to the UC MEXUS-CONACYT Doctoral Fellowship for Mexican students, which currently supports her study of biomechanics at UC Davis.

Although she is devoting her fifth and, she hopes, final year to completing her dissertation, she is already considering where she might take her invention after graduation. A UC Davis program, Innovation Access, which shows researchers how to market the results of their work, planted a seed of hope that her work might find some practical use. “Everybody’s dream is to develop products that actually help people,” she says. “Hopefully this system can benefit somebody someday.”

³UC Case #2007-439-2, “Multi-channel myoelectrical control using single muscle.”
Former UC MEXUS-CONACYT Doctoral Fellow Deborah Perry Romero’s personal experience as a two-time immigrant and scholar of languages and educational psychology has given her a unique understanding of the challenges that immigrant populations and school systems may face in working together.

In 1998, she arrived at UC Santa Barbara to pursue her doctoral degree in education, with an emphasis in language, literacy, and bilingualism. As a native of England, who has lived in Mexico for ten years, Perry Romero said she found herself at a loss to understand the American school culture to which her three children were adjusting. How much more difficult, she wondered, was the experience of entire families who lacked English language skills and struggled to understand a range of issues from class conduct codes to teacher expectations?

Perry Romero’s awareness of the strong connection between language and socio-cultural acquisition informed her research in the years to follow. Working with her doctoral adviser, Richard Durán, and colleagues from UC Santa Barbara, she helped Latino immigrant parents work with their children to familiarize themselves with computers in an after-school program. Parents and their children learned how to write, edit, and publish a newsletter, and they improved their own literacy.

The program, which was designed to decrease the digital divide between the underprivileged and the affluent, involved parents in their children’s education—a factor long recognized as significant in contributing to student success—and brought them into more direct contact with school personnel.

One unanticipated benefit of her stay in Santa Barbara was an appreciation of the value of cross-border institutional collaboration. She returned to Mexico in 2003 to take up a position as professor of modern languages at her alma mater, Universidad Autónoma de Querétaro (UAQ), ideally positioned to demonstrate the multilayered context of language acquisition both to Mexican student teachers and teacher trainees from the United States. Her academic approach and bicultural experiences provided a unique perspective for the bilingual education students from the California State system, who spent six months studying with her in Querétaro while they taught in the local Mexican schools.

In 2006, when she took up her position as an assistant professor in ESL/Bilingual Education in the Hispanic Studies Program at the University of Northern Colorado (UNC), she became involved in a program designed to introduce ESL students to bilingual youth radio as an alternate way to develop not only language but also the many other components of literacy skills.

The participants in the Voces Latinas Project included a group of middle school teachers, Mexican immigrant middle school students, high school music recording students, a local independent radio station, as well as Perry Romero and her university research colleague, Dana Walker, from the College of Education and Behavioral Sciences at the University of Northern Colorado.

The program, founded by Walker, was designed for teenagers who were struggling at school and appeared to have a high likelihood of dropping out. Participants wrote and recorded poetry with a Chicano poet and interviewed experts from the community on topics that the students selected such as gangs, runaways, and abortion.
In contrast to regular school classes under the testing mandate of the No Child Left Behind Act, where Romero says instruction tended to focus on rote learning, the program promoted multimodal literacies as an alternative to the traditional curriculum and social practices of the public schools.

Perry Romero explains that when students, especially adolescents, are encouraged to think about social issues by listening to and editing their own voices as they do in the youth media project, they are better able to reflect upon their own linguistic and cultural experiences, what it means to be an immigrant in this country, and what they can accomplish when they share their stories.

Perry Romero is proud to connect this program to courses she teaches on campus. More recently, she has been collaborating with the Northern Colorado Upward Bound Program, a five-year, $1.2 million federal TRIO grant, awarded to UNC. The program serves first-generation, low-income students from a local high school and is designed to boost graduation while helping students to develop the skills and motivation for post-secondary education.

This semester undergraduate teacher candidates in ESL are gaining invaluable professional and social experience with minority and ELL students by tutoring them in an out-of-school setting. Perry Romero notes that this kind of work provides both undergraduates and the researcher herself with the opportunity to see that they can make a difference.
Former UC MEXUS-CONACYT Doctoral Fellow Victor Ruiz Vera has been interested in the interaction of plants and soil since his undergraduate days at Universidad Autónoma Chapingo. The different ways in which the elements of soil came together to sustain plant life intrigued him, as did the ease with which human misuse could destroy that fertile earth.

Ruiz Vera pursued graduate studies at Colegio de Postgraduados, completing his master’s degree in hydrosciences in 1995, before beginning a doctoral program in Environmental Sciences at UC Riverside. He chose UC Riverside because of its prestigious faculty in soil sciences (including Laosheng Wu, who became his adviser) and because of the close relationship between UC Riverside and the U.S. Salinity Lab. (A research facility located in Riverside that develops new knowledge and technology to resolve crop production problems on salt-affected lands, the Lab promotes sustainable irrigated agriculture and prevention of salt, pesticide, and pathogen degradation in surface and ground-water resources.) Ruiz Vera’s work with the Lab, along with the research of his UC Riverside adviser, became the core of his dissertation, “Effects of Salinity, Sodicity and Clay Mineralogy on Soil Physical and Hydraulic Properties.”

After completing his doctoral degree, Ruiz Vera returned to Colegio de Postgraduados, Campus San Luis Potosí, where he is currently an associate professor. His experiences at UC Riverside and the Salinity Lab had immediate implications for addressing local agricultural practices. In one of his first projects, he used an electromagnetic device for soil salinity appraisal in situ based on principles that were established in the Lab.

Victor Ruiz Vera, at right, discusses the distribution of soil treatments in an experimental plot in the El Salado Catchment with Fernando Sanchez, head of research on crop production systems at Colegio de Postgraduados, campus San Luis Potosí.
Ruiz Vera...Continued from page 6

For this ongoing five-year project, Ruiz Vera and his colleagues are in the process of evaluating site-specific management practices to prevent further salinization of the land. Once they have verified the extent of the soil degradation and its cause, they will work with farmers to teach them how to maintain the correct water-salt balance in the surface soil using such techniques as irrigation management, drainage, and drip or sprinkler systems. However, advising on such technical issues must be done in the context of the socio-economic environment, Ruiz Vera says. This means that the use of costly equipment or supplies (if they prove necessary) to prevent the problem would not be possible without governmental help.

In another five-year project, Ruiz Vera is examining local crop production in light of the various parameters affecting it. He will also evaluate which kinds of crops would best flourish in an environment where the soil tends to collect salts. Beans and onions, for example, are highly sensitive to excessive soil salts, whereas tomatoes are relatively tolerant.

This summer, Ruiz Vera was appointed assistant director of education for his campus, a position that will require him to supervise and coordinate all campus educational activities, and work with faculty and administration to develop a doctoral program. He hopes to help create one of the best agricultural sciences doctoral and research programs in Mexico.

Despite his many responsibilities, Ruiz Vera continues to work along parallel tracks with Laosheng Wu, his former UC Riverside adviser, in addressing soil salinity and its management. Both men say they remain in constant contact about their individual projects and the papers that they are jointly authoring. They look forward to the day when, together with their students, they will be working on new collaborative research.

²
We are pleased to welcome 16 new doctoral students who will be funded through the UC MEXUS-CONACYT Doctoral Fellowship.

Alberto Barrera Enderle
UC Irvine
History

Monica Castillejos Aragon
UC Berkeley
Law

Michel Estefan Gutierrez
UC Berkeley
Sociology

Lorena Fernandez Anderson
UC Davis
Agricultural & Environmental Chemistry

Francisco Fernandez De Castro Santos
UC Irvine
Planning, Policy & Design

Jose Gonzalez Fuentes
UC Davis
Horticulture & Agronomy

David Gonzalez Hernandez
UC San Diego
Communication

Rogelio Jimenez Espinoza
UC Davis
Chemical Engineering

Raymundo Marcos Martinez
UC Riverside
Environmental Sciences

Alfredo Mier y Teran Lopez Sanchez
UC Los Angeles
Global Economics & Management

Sergio Nigenda Morales
UC Los Angeles
Ecology & Evolutionary Biology

Lourdes Ortiz Bautista
UC Santa Cruz
Philosophy

Maria Rodriguez Chamussy
UC Berkeley
Agricultural & Resource Economics

Jose Sainz Santamaria
UC Santa Barbara
Environmental Science & Management

Jose Vazquez Medina
UC Merced
Quantitative and Systems Biology

Daniel Wegman Ostrosky
UC Riverside
Physics & Astronomy

Doctoral Fellowship Alumni: Where are they now?

Araceli Aguilar Melendez
UC Riverside, Cohort 2000
Investigadora-Profesora
Universidad Veracruzana, Centro de Investigaciones Tropicales

Miriam Aracely Anaya Loyola
UC Davis, Cohort 1998
Investigadora
Universidad Autónoma de Querétaro, Facultad de Ciencias Naturales, Maestría en Nutrición Humana

Judith Alejandra Frias Anguiano
UC Los Angeles, Cohort 2001
Coordinadora de Asesores
Instituto Mexicano del Seguro Social

Gustavo Garcia Arias
UC Davis, Cohort 2002
Presidente
Unidad Nacional Progresista, Agrupación Política Nacional, Comité Ejecutivo Nacional

Gregorio Hernandez Zamora
UC Berkeley, Cohort 1999
Postdoctoral Research Associate
Vanderbilt University, Center for the Americas

Antonio Rodolfo Lloret Carrillo
UC Santa Barbara, Cohort 2001
Profesor
Instituto Tecnológico Autónomo de México, Departamento Académico de Administración

Jose Gonzalo Rangel Lopez
UC San Diego, Cohort 2001
Derivatives Research Project Fellow
New York University, Stern School of Business

Marco Antonio Rodriguez Jimenez
UC Irvine, Cohort 1999
Research Scientist
Colorado State University, Cooperative Institute for Research in the Atmosphere

Arturo Vargas Bustamante
UC Berkeley, Cohort 2003
Assistant Professor
UC Los Angeles, School of Public Health
Taking into consideration the fact that I have been working with advanced graduate students for over 25 years (here at UCSD and previously at the University of Texas, Austin) and have directed nearly as many Ph.D. theses, I can say that these teaching experiences have been among the most rewarding I have had, and my Mexican students among the best.

There are great benefits on both sides of this exchange—for U.S. graduate education and for the Mexican historical profession to which most of these students return. Since academic history is done rather differently in the U.S. and Mexico, even when the two disciplinary cultures share the common object of Mexican history, having a Mexican graduate student in an advanced seminar enriches the discussions by introducing contrasting points of view among groups of students who received their earlier education in a predominantly American setting. This is not a matter of an essentialist view of culture—that only Mexicans have insights about Mexico, Russians about Russia, or Brazilians about Brazil—although there is something to be said in favor of knowing a culture from the inside. Mexican students at the doctoral level, I have found, are almost invariably more sophisticated in their grasp of the historiography, and often in theoretical, conceptual, and methodological terms, than their North American counterparts, although they have not necessarily traveled the same path. While the prevailing theoretical orientation of such students might at one time have been Marxist, this is no longer so uniform, and is in fact fading in favor of a still-materialist eclecticism. There are a number of reasons for their broader historical culture aside from the fact that applying and being admitted to a first-rank American graduate program serves as a filter allowing through only the better students to begin with. Most important, probably, is the fact that Mexican doctoral students have completed the licenciatura or even maestría theses earlier in their careers, and are therefore likely to have done extensive empirical research and written a large-scale work, even if it is still only a student exercise. Then, too, Mexican students are quite likely to have done some teaching prior to beginning an American doctoral program. On the other hand, most such students come into our doctoral program with a specific proyecto right from the start, arising from the way advanced graduate training is done in Mexico. This comports ill with the broad training in Latin American history we like to impart in this country, while in Mexico itself, or even in Britain or France, historians are trained strictly as specialists on the history of Mexico.

Whatever the case, having such students in a seminar setting can be extremely stimulating for the sort of open-ended and skeptical discussions that make such encounters potentially a rich experience: for the Mexican students themselves as they subtly come to question the historical pieties they have been taught earlier in their educations, and for American students who benefit from their unique insights and join them in the process of deconstructing the history of their own and other societies.

‘These teaching experiences have been among the most rewarding…and my Mexican students among the best.’

Eric Van Young
Stable unions are as difficult to form in chemistry as in life. Studying chemical bonds is further complicated by the infinitesimal size of the molecular structures and the speed with which molecules form and break apart.

UC MEXUS-CONACYT Doctoral Fellow
Alfredo Quinto Hernández faces an additional challenge in his dissertation research at UC Santa Barbara because one of the nitrogen compounds that he is studying, called Cyclic-N₃, so far, has not been seen in nature. Yet, the outcome of his work could have a significant impact in creating cleaner and more powerful forms of energy.

An interest in molecular chemistry that developed during high school led Quinto Hernández to complete a bachelor’s degree in chemical engineering in 1998 at the Instituto Tecnológico de Zacatepec, Morelos, and a master’s in chemistry in 2001 at Mexico’s national university, Universidad Nacional Autónoma de México (UNAM). Intrigued by the philosophy of science and metaphysics, he completed a second bachelor’s in philosophy from UNAM in 2004 while exploring his options for doctoral programs. He was accepted at several universities that specialized in the area of physical chemistry, selecting UC Santa Barbara because of the work of Professor of Physical Chemistry Alec M. Wodtke in synchrotron radiation and surface chemistry. Quinto Hernández was impressed by Wodtke’s credentials, and their evolving relationship has engendered a mutual respect. About him, Wodtke says, “Alfredo . . . has shown a real passion for science. He is a great example of what one can achieve when one finds work that one really loves.”

The roots of Quinto Hernández’s research in nitrogen molecules extend back to Scotland in 1772, when University of Edinburgh doctoral student, Daniel Rutherford, first reported an extremely stable molecule: N₂. In the 200-plus years since Rutherford described the simplest and most stable of the polynitrogen molecules, chemists have been prevented from closely exploring these molecules due to a lack of accurate experimental methods in the field of chemical reaction kinetics. During the last few decades, however, a new field of research in chemistry, reaction dynamics, has provided a deeper understanding of how chemical reactions take place. Reaction dynamics suggests that chemical reactions involving polynitrogen molecules should behave in the same way as those involving other kinds of molecules.
Quinto Hernández...Continued from Page 10

One of Quinto Hernández’s mentors, 1986 Nobel Prize-winner Yuan T. Lee, was among the scientists who developed new methods for the advancement of this field. Lee conducted much of his groundbreaking work at UC Berkeley, where his students included Quinto Hernández’s adviser and many of today’s top researchers in that area of chemistry.

Quinto Hernández calls this group of scientists “the Yuan T. Lee school.” Lee, who last year retired as president of Taiwan’s conglomerate of top research institutions, Academia Sinica, continues his research at its Institute of Atomic and Molecular Sciences and the Genomics Research Center. He remains actively involved in probing complex chemical bonds and collaborating with researchers and graduate students such as Wodtke and Quinto Hernández.

Since 2003, when Wodtke first reported experimental evidence of Cyclic-N_3—the smallest nonlinear polynitrogen molecule with three atoms in a triangular formation—much theoretical and experimental work has gone into understanding this molecule.\(^1\) However, until now Cyclic-N_3 had not been directly identified, characterized, or mass produced. Theoreticians have predicted two important aspects of Cyclic-N_3 that have made it interesting to experimental scientists: its triangular molecular geometry and its energetic stability, or its difficulty decomposing in the absence of collisions with other active molecules.

It was at this point in the evolution of scientific knowledge regarding Cyclic-N_3 that Quinto Hernández began his cutting-edge research. He is examining the thermochemistry of several precursors of Cyclic-N_3 (materials such as HN_3, CIN_3 and CH_3N_3 ) that could be used to produce it. Much of that work has been done in collaboration with Lee and his colleagues in Taiwan, Jim Jr-Min Lin and Yin-Yu Lee. Currently, he is working in Hawaii using spectroscopic instruments such as infrared spectroscopy to detect Cyclic-N_3 as part of a collaborative project between Wodtke and Ralf I. Kaiser from the University of Hawaii at Manoa. Because of the tendency of Cyclic-N_3 to disintegrate, Quinto Hernández also is determining ways to stabilize it so as to synthesize it in bulk, which would enable scientists to handle it and explore its technological applications.

Although this work resides in the upper reaches of theoretical chemistry, Quinto Hernández says the far-reaching practical uses are tremendously exciting, and could, among other things, change the way we travel. The high-density energy produced by Cyclic-N_3 not only has tremendous powers of propulsion, it is friendly to the environment because the by-product that would be released into the environment would be clean N_2. If Cyclic-N_3 could be produced in bulk, it could conceivably replace combustibles such as gasoline. These ideas, he hastens to add, are still in the realm of dreams. “There is long road to walk yet to see that this dream could come true.”

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[1] Chairman of the Department of Chemistry and Biochemistry at UC Santa Barbara, Wodtke also is director of the Partnership for International Research and Education, a program of scientific collaboration with the People’s Republic of China.


‘Alfredo...is a great example of what one can achieve when one finds work that one really loves.’

Alec M. Wodtke
Hugo J. Avila Paredes (2004 cohort, Chemical Engineering and Materials Science, UCD) was nominated for UCD’s Outstanding Graduate Student Teaching Award. He served as seminar chair of the Graduate Student Organization for the Department of Chemical Engineering and Materials Science. His co-authored article, "Direct Spectroscopic Observation of Size-dependent Vacancy Distribution in Y-doped CeO$_2$,,” is published in the Journal of Materials Chemistry.

Leandro Balladares (2007 cohort, Computer Engineering, UCSC) co-authored the article "Do Alu Repeats Drive the Evolution of the Primate Transcriptome?" with Araxi Urrutia of the University of Bath and Laurence Hurst of UCSC. It is available in the online journal Genome Biology.


Rodrigo Beas Luna (2007 cohort, Graduate Program in Ecology & Evolutionary Biology, UCSC) received the Student Research and Education Award from the Friends of Long Marine Lab for his research proposal, "Kelp Forest Ecological Modeling Approach for Monitoring and Evaluating Marine Protected Areas in Central California." 


Ricardo Gomez Vilchis (2004 cohort, Political Science, UCSD) presented papers at several conferences including the Midwest Political Science Association’s National Conference in Chicago and the All-Grad Research Symposium at UCSD. He was awarded the UC MEXUS Dissertation Research Grant for his project, "Presidential Approval in Mexico, Determinants and Effects, 1989-2006," and the Center for U.S.-Mexican Studies Visiting Research Fellowship.

David R. Heres Del Valle (2004 cohort, Agricultural & Resource Economics, UCD) was awarded a summer fellowship from the UC Davis Washington Program and the Jastro-Shields Graduate Research Award. He co-authored the report "Methodology for Design of a System for the Reduction of Emissions from GHGs from Local Government Bodies in the Basque Country," a research project based at Italy’s Fondazione Eni Enrico Mattei that was funded by the Basque Government’s Department of Land Use and the Environment.

Marco Hernandez Bello (2004 cohort, Plant Pathology, UCD) received the Jastro-Shields Graduate Research Award for two consecutive years for his project titled “Identification and Functional Analysis of a Putative Extracellular Transglutaminase Gene Encoding of a Cell Wall Protein in Colletotrium Graminicola.”

Roberto Hernandez’s (2006 cohort, School of Public Policy, UCB) documentary film, El Externume, about the case of Antonio Zuñiga was selected for funding by the Jan Vrijman Fund.

Xochiti Juarez Varela (2005 cohort, Geography Graduate Group, UCD) earned a second Jastro-Shields Graduate Research Award for her research project, “Changes in Roles of Rural Women of Mexico as a Consequence of Male Migration to the United States in the 1990s: Challenges and Opportunities,” which looks at the indigenous communities of the Sierra Norte de Puebla, Mexico.

James Ketchum Mejia (2004 cohort, Graduate Group in Ecology, UCD) was awarded the Jastro-Shields Graduate Research Award and the Hemispheric Institute on the Americas Summer Research Fellowship to continue his research on the movement patterns of sharks and biological hotspots in the Galapagos Islands. His work was featured in a television episode, "Shark Superhighway,” of National Geographic’s Explorer program.

Mariano Lizarraga (2006 cohort, Computer Engineering, UCSC) won a Distinctive Excellence Award in the Microchip 16-Bit Embedded Control Design Contest for his work, "CAN Controlled Servo with Optional Contactless Magnetic Rotary Encoder," which he designed for UCSC’s autonomous sailboat, Nautilus. Mariano was also awarded the Student Scholarship by Apple, Inc. to attend its Worldwide Developers Conference in San Francisco, California.

Julio Lorda (2003 cohort, Ecology, Evolution & Marine Biology, UCSB) co-authored the paper "Ecosystem Energetic Implications of Parasite and Free-living Biomass in Three Estuaries," published in Nature. The paper received media coverage in several countries including Austria, Brazil, Germany, and the U.S.

Xochiquetzel Marsilli Vargas (2006 cohort, Anthropology, UCB) was appointed as lead coordinator of UCB’s Linguistic Anthropology Working Group to bring together anthropologists worldwide for workshops and symposia. Also, she was awarded the Tinker Summer Field Research Grant by UCB’s Center for Latin American Studies to conduct preliminary fieldwork on mental health concepts in Buenos Aires, Argentina.
Emilio Martinez de Velasco (2005 cohort, City & Regional Planning, UCB) was selected to present the paper “Accelerating Regional Systems of Innovation? Understanding the Effects of the Technology Business Accelerator Program in the Formation of Resources and Capabilities to Innovate in Mexican Regions” at the Globelics Academy in Tampere, Finland. Of the 31 students who participated in the Academy, he was one of two selected to present a paper at the Globelics International Conference in Mexico City this fall.

Francisco Monge (2003 cohort, Pathology, Microbiology & Immunology, UCD) presented the co-authored paper “Development of Rapid and Inexpensive Diagnostic Kits for Foot-and-Mouth Disease Virus and Rift Valley Fever Virus” at the Annual Meeting of the National Center for Foreign Animal and Zoonotic Disease Defense at Texas A&M University and the Department of Homeland Security University Network Summit in Washington, D.C.

Erick Moreno Centeno (2005 cohort, Industrial Engineering & Operations Research, UCB) was awarded the Graduate Student Instructor of the Year Award by UCB’s Institute of Industrial Engineers.


Diego Romero Perez (2003 cohort, Molecular Pathology, UCSD) co-authored three articles: “Zinc-binding Groups Modulate Selective Inhibition of MMPs,” “Short and Long-term Effects of (-)-Epicatechin on Myocardial Ischemia/Reperfusion Injury,” and “Cardiac Uptake of Minocycline and Mechanisms of In Vivo Cardioprotection.” They were published in ChemMedChem, the American Journal of Physiology-Heart and Circulatory Physiology, and the Journal of the American College of Cardiology, respectively.

Juan Carlos Suarez Serrato (2006 cohort, Economics, UCB) presented “The Role of Political Parties in Electoral Competition” at the UCI Center for the Study of Democracy’s Graduate Student Conference and “Local Average Treatment Effect (LATE) for School: Instrumental Variables, Fixed Effects, and the Returns to Education” at the American Economic Association Pipeline Conference at UCSB.

Erick Ulin Avila (2006 cohort, Mechanical Engineering, UCB) co-authored the paper “Three-dimensional Optical Metamaterial with Negative Refractive Index,” published in Nature. This paper explores an approach to bending light backwards, an important step towards making objects invisible.

Arturo Vargas Bustamante’s (2003 cohort, School of Public Policy, UCB) article, “Willingness to Pay for Cross-Border Health Insurance between the United States and Mexico,” was published in Health Affairs. His paper estimates the demand for a binational health plan comprising preventative and ambulatory care in the United States and comprehensive care in Mexico.


Silvia Ventura Luna (2005 cohort, Anthropology, UCR) was selected for a UC MEXUS Dissertation Research Grant for her project, “Community Governance within a Transnational Context: The Case of San Miguel Cuevas,” which examines how an indigenous community with high out-migration governs itself and negotiates its relationship to citizenship and identity. Her fieldwork will take place in the Mixtec region of Oaxaca, Mexico and in Fresno, California.

Stella Villegas Amtmann (2003 cohort, Ecology and Evolutionary Biology, UCSC) received the award for Best Spoken Presentation by a doctoral student for “Diving Behavior and Physiological Plasticity in a Galapagos Sea Lion Population” which she presented at the Biennial Conference on the Biology of Marine Mammals in Cape Town, South Africa. She was first author of “Multiple Foraging Strategies in a Marine Apex Predator, the Galapagos Sea Lion,” published in the journal Marine Ecology Progress Series. A second article, “Field Validation of an Inexpensive Time-Depth Recorder,” will soon be available for online preview in Marine Mammal Science.

Cristo Yee Rendon’s (2003 cohort, Physics, UCSC) paper, “Transmission of Single Mode Ultrathin Terahertz Photonic Crystal,” was published in Applied Physics Letters. He presented the paper “Integrated Lenses for Enhanced Coupling into Terahertz Photonic Crystal Slab Waveguides” at the annual meeting of the American Physical Society. He also served as adviser for an undergraduate senior thesis project.
Dr. Miriam Anaya Loyola  
1998 Cohort  
UC Davis, Nutrition  
*Vitamin B12 Deficiency: Prevalence and Causes in Guatemala and Mexico*

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Dr. Barbara Ayala Orozco  
2001 Cohort  
UC Santa Cruz, Environmental Studies  
*Maintaining the Drivers of Tropical Plant Diversity: Plant Disease in Conservation Practice*

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Dr. Sergio Barberan Soler  
2002 Cohort  
UC Santa Cruz, Molecular, Cell & Development Biology  
*Alternative Splicing Regulation During Caenorhabditis Elegans Development and Evolution*

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Dr. Martha Bonilla Moheno  
2002 Cohort  
UC Santa Cruz, Environmental Studies  
*Forest Recovery and Management Options in the Yucatan Peninsula, Mexico*

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Dr. Maria Celorio Mancera  
2002 Cohort  
UC Davis, Plant Biology  
*The Biochemical and Molecular Characterization of Lygus Hesperus Salivary Polygalacturonases at the Interface of an Agriculturally Important Plant-mirid Interaction*

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Dr. Herguin Cuevas Arellano  
2003 Cohort  
UC Los Angeles, Environmental Health Sciences  
*Assessment of an Urban Runoff Diversion System for the Contamination of a Drinking Water Reservoir with PAHs*

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Dr. Raul Howe Marañon  
2005 Cohort  
UC Berkeley, Law  
*Corruption Discourages Foreign Investments? The Role of Bilateral Investment Treaties*

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Dr. Carlos Lopez Suarez  
2002 Cohort  
UC Berkeley, Economics  
*Essays in International Economics*

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Dr. Fabiola Manjarrez Gutierrez  
2003 Cohort  
UC Davis, Mathematics  
*Thin Circle-valued Morse Functions for Knots in $S^3$*

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Dr. Martin Medina Elizalde  
2002 Cohort  
UC Santa Barbara, Marine Science  
*The Thermal Evolution of the Western Equatorial Pacific Warm Pool During the Pleistocene and Late Pliocene Epochs*

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Dr. Maria Moreno Carranco  
2002 Cohort  
UC Berkeley, Architecture  
*The Socio-spatial Production of the Global: Mexico City Reinvented through the Santa Fe Urban Megaproject*

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Dr. Alejandro Moreno Okuno  
1999 Cohort  
UC Berkeley, Economics  
*Essays in Behavioral Economics*

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Dr. Martha Palomino Tovar  
2002 Cohort  
UC Berkeley, Integrative Biology  
*Evolutionary Ecology of the Nickel Hyperaccumulator Thlaspi Montanum Var. Montanum: The Role of Herbivory*

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Dr. Jose Rodriguez Lopez  
2001 Cohort  
UC Berkeley, Economics  
*Essays on Exchange Rates*

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Dr. Diego Romero Perez  
2003 Cohort  
UC San Diego, Molecular Pathology  
*Role of Matrix Metalloproteinases in Mediating Myocardial Injury During Ischemia/Reperfusion*

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Dr. Carlos Zavala Jurado  
2002 Cohort  
UC Berkeley, Mechanical Engineering  
*Engine Modeling and Control for Minimization of Hydrocarbon Coldstart Emissions in SI Engine*

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**UC MEXUS is proud of our graduates’ accomplishments. We wish them the best in their future endeavors!**
On the other side, when these students enter Mexican academic life after completing their studies, they are likely to bring with them somewhat different views of how the historical craft works, what the important questions and the best models are, and what conceptual tools one deploys to answer questions in historical research. While one or two students have remarked to me that an American training creates a certain tension for them in speaking the historiographical language of their home discipline in Mexico, none has ever claimed that this was, in the long run, anything but an advantage.

While studying in the U.S. they are likely to read a somewhat different Anglophone historiography that may overlap with the Hispanophone tradition, but that does not duplicate it. They also become familiar with a different tradition in social theory and with different approaches to historical questions.

To take but one example with which I myself am familiar, cultural history as we understand the approach in this country is only just now beginning to appear in the work of younger Mexican historians, and has been strongly influenced by the American training some have received, and by the appreciation of this literature by a broader Mexican professional community. It is not necessarily the case that freshly minted Mexican (or Latin American) Ph.D.s go back to their home country to evangelize about this or that approach to doing historical research and writing, or that they act as some sort of fifth column to sap the vitality of the profession, or even that the approaches they learn ultimately produce better published work. It is simply that their intellectual horizons are broadened in much the same way that an American student doing advanced graduate work in Mexico would emerge with a more nuanced vision of the discipline and of the substance of history itself. The exchange, in other words, is invaluable, and borders have been crossed in both directions.

Eric Van Young has served as adviser to three UC MEXUS-CONACYT doctoral fellows and a CONACYT fellow. He is the interim dean of arts and humanities and a professor of history at UC San Diego.

We are pleased to welcome Sabrina Quint, who has joined UC MEXUS as a student assistant. Sabrina will aid the International Academic Programs department with entering and updating all records for the Institute’s contact database. She is a sophomore at UC Riverside and is pursuing a bachelor’s degree in biology. Sabrina is from the city of Moraga in Northern California. Please join us in welcoming her to the UC MEXUS team!

All featured articles written by Frances Fernandes, principal editor at UC MEXUS.
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