UNIVERSITY AT ALBANY
State University of New York

INNOVATION BEGINS HERE

College of Arts and Sciences
2014-15 Research, Scholarship and Creative Activity
It all starts here.

The College of Arts and Sciences produces path-breaking work that expands our knowledge of the world, of each other, and of ourselves. Our faculty explore current and emerging social problems both across the world and close to home; unleash their talent to convey meaning through performance, artwork, the written word, and other forms of creative expression; investigate natural phenomena from the subatomic to the cosmic and all sizes in between; and analyze the body and mind, and the environment surrounding them, to fight disease, extend life, and positively affect the human condition.

As part of a public institution, the College is committed to leveraging its research enterprise in ways that address pressing needs in our regional, national, and global communities. Indeed, many of our projects yield results with direct application to real-world problems. Even more of them, however, represent the cracks in the pavement that will one day lead to a breakthrough. Very rarely do we find meaningful answers to our burning questions when we first take a swing at them. Rather, we approach inquiry from multiple directions using an array of tools, building on the work done before or starting from a promising place as yet untouched, in a humble effort to expand the depth and breadth of what is known. We strive to uncover some new understanding, theory or technology, but for knowledge to be applied it must first be discovered. The free and multidisciplinary pursuit of knowledge for its own sake - the hallmark of the liberal arts - is the engine that drives that discovery. Accordingly, a strong and productive College of Arts and Sciences is the engine that drives the entrepreneurial and engaged university. Simply put: innovation begins here.

This compendium is a snapshot of the scope of our work as expressed by our faculty’s scholarly publications and other intellectual and creative endeavors appropriate to their disciplines, as reported in the annual faculty activity reports for the period May 1, 2014, to April 30, 2015. We also list the projects that received grant funding during the period July 1, 2014, to June 30, 2015. This is not an exhaustive account of our productivity, however. This compendium does not capture, for example, the innumerable conference presentations, unpublished reports, and media contributions, as well as service on prestigious national committees. We also have not listed the dozens of funded projects that are ongoing thanks to grants received in previous years. We have nevertheless done our best to provide an accurate review to demonstrate the impact our faculty make in their respective fields.

I am proud of the many achievements of our talented faculty. My congratulations and thanks to all who contributed to another successful year.

Edelgard Wulfert
DEAN OF THE COLLEGE OF ARTS AND SCIENCES
PROFESSOR OF PSYCHOLOGY
COLLINS FELLOW
2015 Chancellor’s and President’s Awards for Excellence

Recipients in the College of Arts and Sciences

Charles Hartman
EAST ASIAN STUDIES
Chancellor’s Award for Excellence in Research

Igor Lednev
CHEMISTRY
Chancellor’s Award for Excellence in Research

Michael Sattinger
ECONOMICS
Chancellor’s Award for Excellence in Research

Melinda Larsen
BIOLOGICAL SCIENCES
President’s Award for Excellence in Research

Li Niu
CHEMISTRY
President’s Award for Excellence in Research

Elaine Salisbury
ENGLISH/JOURNALISM
President’s Award for Excellence in Teaching

Laura Wilder
ENGLISH
Chancellor’s & President’s Awards for Excellence in Teaching
Contents

Publications and Intellectual Contributions

Humanities and Fine Arts 5
Social and Behavioral Sciences 17
Science and Mathematics 31

Funded Projects 43

Stories from 2014-15

UAlbany Professor Breathes New Life into Region’s Vacant Homes 4
UAlbany Art History Professor in Serbia with U.S. Ambassador to Announce Mosaic Presentation from Roman Restoration Project 6
Carl Bon Tempo Receives Dean’s Award for Outstanding Achievement in Teaching 11
UAlbany’s Newman Gives Lecture at Library of Congress 14
UAlbany’s Lyons Wins National Award for Diversity 15
UAlbany’s Svare Headed to Thailand on Fulbright Grant 24
UAlbany’s Dreby Explores Impact of U.S. Immigration Policies 26
UAlbany Sociologist on Fulbright Researches Residential Segregation in Turkey 28
UAlbany Hosts Weather Camp for Area’s Future Meteorologists 30
UAlbany Scientist Garners National Science Foundation CAREER Award for Study of Oceans 33
UAlbany-led Study Finds Vibration Theory of Odor Reception Implausible 36
Mathematician’s Research Funding Hits the Decade Mark 40
UAlbany Sociologist will Study Role of Immigrant Entrepreneurs in Los Angeles 46
RNA Institute Researcher Working to Shine a Light on 3D RNA Structure Prediction to Advance Drug Discovery 48
From the NewsCenter (June 2015) -- Breathing Lights, one of four winners in the nationwide Bloomberg Philanthropies Public Art Challenge, is the brainchild of lead artist Adam Frelin, a professor in the University at Albany’s Department of Art and Art History, and lead architect Barbara Nelson, AIA.

The Challenge provides up to $1 million over two years for temporary works “that celebrate creativity, enhance urban identity, encourage public-private partnerships, and drive economic development.”

The award was a major coup for the Capital District's arts scene. Breathing Lights will illuminate hundreds of empty homes within the cities of Albany, Schenectady, and Troy, with lights that dim and glow to emulate the breathing of a living being. The installation aims to regenerate interest in once-vibrant neighborhoods with high vacancy rates. The three cities collaborated on a partnership that drew more than two dozen public and private partners, including the Capital Region Creative Economy Project, General Electric, and the Lighting Research Center at Rensselaer Polytechnic Institute. The University at Albany Foundation agreed to fund the project up to $10,000 for additional cost and collaboration.

“Regardless of whether our viewers are knowledgeable about visual art, I believe that it is imperative that we proposed a project that will be captivating to everyone seeing it,” said Frelin. “Even if they don’t fully understand why it’s happening, I want the public to be able to be enriched by this experience. I want the person commuting home from work to see, out of the corner of their eye, abandoned buildings brought back to life by our breathing light effect. I want the people living in these neighborhoods to discover that the vacant homes surrounding them are now pulsing with life.”

Frelin said he hopes the project will illustrate to the region the power that the arts can have in creating an evocative experience that enriches all, while also laying the groundwork for the creation of a public arts initiative that will make it easier for projects like Breathing Lights to be realized in the future.

The project was the only one to win in the Northeast and the only collaboration. Frelin notes, “In many ways, being an artist today requires that I work collaboratively. What will make this process rewarding for me is having the chance to work with architects, engineers, private-sector partners and civic leaders in my community to bring about a creative outcome that is greater than what any one of us could have accomplished alone.”

The title is evocative of Schenectady’s motto, The City that Lights and Hauls the World. The motto comes from Schenectady’s two major employers in the first part of the 20th century -- General Electric Company and American Locomotive Company.

The other winning cities include Gary, IN., Spartanburg, S.C., and Los Angeles, Calif.

When the call for submissions first went out, Frelin and Nelson sent independent submissions to the Community Foundation for the Greater Capital Region that complemented each other. The Foundation brought them together and they developed Breathing Lights.

“Regardless of whether our viewers are knowledgeable about visual art, I believe that it is imperative that we proposed a project that will be captivating to everyone seeing it,” said Frelin. “Even if they don’t fully understand why it’s happening, I want the public to be able to be enriched by this experience. I want the person commuting home from work to see, out of the corner of their eye, abandoned buildings brought back to life by our breathing light effect. I want the people living in these neighborhoods to discover that the vacant homes surrounding them are now pulsing with life.”

Frelin said he hopes the project will illustrate to the region the power that the arts can have in creating an evocative experience that enriches all, while also laying the groundwork for the creation of a public arts initiative that will make it easier for projects like Breathing Lights to be realized in the future.

The project was the only one to win in the Northeast and the only collaboration. Frelin notes, “In many ways, being an artist today requires that I work collaboratively. What will make this process rewarding for me is having the chance to work with architects, engineers, private-sector partners and civic leaders in my community to bring about a creative outcome that is greater than what any one of us could have accomplished alone.”

The title is evocative of Schenectady’s motto, The City that Lights and Hauls the World. The motto comes from Schenectady’s two major employers in the first part of the 20th century -- General Electric Company and American Locomotive Company.

The other winning cities include Gary, IN., Spartanburg, S.C., and Los Angeles, Calif.
Humanities and Fine Arts
Publications, Intellectual Contributions, and Creative Activity

Art and Art History

AMY R. BLOCH


DAVID CARBONE


LEONA E. CHRISTIE


SARAH R. COHEN

RACHEL DRESSLER

ROB S. EDELMAN

Adapted from the NewsCenter (December 2014) -- UAlbany Professor of Art and Art History Michael Werner was in Serbia with U.S. Ambassador Michael D. Kirby to present the restored and wall-mounted Mercury Mosaic and sections of the residential room geometric mosaic now undergoing conservation in the Roman-era Imperial Palace in Sirmium. The Ambassador also planned to visit Sremska Mitrovica’s Mosaic Restoration Laboratory, which has hosted archaeology students and researchers from UAlbany in connection with the project.

Through the Ambassadors Fund for Cultural Preservation, the U.S. Embassy contributed $73,000 to the Regional Institute for the Protection of Cultural Monuments for the restoration of ancient mosaics at the Roman Imperial Palace in Sirmium. The embassy’s support of the Sirmium project is part of a larger effort to help Serbia preserve and develop cultural heritage sites throughout the country, and encourage economic development through tourism.

JOHN D. PERSON

East Asian Studies

ANDREW S. BYON


FAN PEN L. CHEN

ANTHONY DEBLASI


SUSANNA FESSLER

CHARLES M. HARTMAN

English

THOMAS A. BASS
Visiting Professor, University of Tunis - Institut de Presse et des Sciences de l'Information (2014)
Book Tour and Media Appearances, Vietnam (May 2014), on publication of the Vietnamese translation of The Spy Who Loved Us.

BRET E. BENJAMIN
Honorable Mention, UUP Journalism Awards, United University Professions (April 2015)

JEFFREY BERMAN


TAMIA L. CAREY

Tom D. Cohen

TERESA EBERT
The Other Adam Smith

With William Montague
Stanford University Press, 2014

The Other Adam Smith represents the next wave of critical thinking about the still under-examined work of this paradigmatic Enlightenment thinker. Not simply another book about Adam Smith, it allows and even necessitates his inclusion in the realm of theory in the broadest sense. Moving beyond his usual economic and moral philosophical texts, Mike Hill and Warren Montag take seriously Smith's entire corpus, his writing on knowledge, affect, sociability and government, and political economy, as constituting a comprehensive—though highly contestable—system of thought. We meet not just Smith the economist, but Smith the philosopher, Smith the literary critic, Smith the historian, comprehensive—though highly contestable—system of thought. We meet not just Smith

M. K. Hill


ERIC C. KEENAGHAN


KIR A. KUIKEN


STEPHEN M. NORTH


WENDY RAPHAEL ROBERTS

NEH Long Term Fellow at American Antiquarian Society (April 2015)

NEH Long Term Fellow at the Massachusetts Historical Society (January 2015)


SAM SCHALK


HELENE E. SCHECK


PAUL STASI


LYNNE TILLMAN

Honoree, Triple Canopy (October 29, 2014) Honored for extraordinary life and work. Kestnbaum Writer-in-Residence, University of Chicago (May 2014)
Stephen North
DISTINGUISHED TEACHING PROFESSOR
DEPARTMENT OF ENGLISH
Appointed a
COLLINS FELLOW
in 2014-15 for extraordinary devotion to this University and the people in it over a sustained period of time.

The Twelve Point Type Award For Essays We Really Like, Type Books (June 2014) for What Would Lynne Tillman Do? (Red Lemonade Press, 2014)
What Would Lynne Tillman Do?

LAURA A. WILDER

History
MITCH ASO

IRIS BERGER

SHEILA CURRAN C. BERNARD
Best Film, Short Subject; Best Cinematography for “Jerusalem” (IMAX), Giant Screen Cinema Association (September 21, 2014)(Contributing writer)

CARL J. BON TEMPO

RICHARD S. FOgartY
African Asylum at a Crossroads: Activism, Expert Testimony, and Refugee Rights

Edited with Tricia Redeker Hepner, Benjamin N. Lawrance, Joanna T. Tague, and Meredith Terretta
Ohio University Press, 2015

African Asylum at a Crossroads: Activism, Expert Testimony, and Refugee Rights examines the emerging trend of requests for expert opinions in asylum hearings or refugee status determinations. This is the first book to explore the role of court-based expertise in relation to African asylum cases and the first to establish a rigorous analytical framework for interpreting the effects of this new reliance on expert testimony.

Over the past two decades, courts in Western countries and beyond have begun demanding expert reports tailored to the experience of the individual claimant. As courts increasingly draw upon such testimony in their deliberations, expertise in matters of asylum and refugee status is emerging as an academic area with its own standards, protocols, and guidelines. This deeply thoughtful book explores these developments and their effects on both asylum seekers and the experts whose influence may determine their fate.

cover image and synopsis from publisher

Between Land and Sea: The Atlantic Coast and the Transformation of New England

Christopher Pastore
Assistant Professor
Department of History
Harvard University Press, 2014

One of the largest estuaries on the North Atlantic coast, Narragansett Bay served as a gateway for colonial expansion in the seventeenth century and the birthplace of American industrialization in the late eighteenth. Christopher Pastore presents an environmental history of this watery corner of the Atlantic world, beginning with the first European settlement in 1636 and ending with the dissolution of the Blackstone Canal Company in 1849. Between Land and Sea traces how the Bay’s complex ecology shaped the contours of European habitation, trade, and resource use, and how littoral settlers in turn reconfigured the physical and cultural boundaries between humans and nature.

Narragansett Bay emerges in Pastore’s account as much more than a geological formation. Rather, he reimagines the nexus of land and sea as a brackish borderland shaped by the tension between what English settlers saw as improvable land and the perpetual forces of the North Atlantic Ocean. By draining swamps, damming rivers, and digging canals, settlers transformed a marshy coastal margin into a clearly defined edge. The resultant “coastline” proved less resilient, less able to absorb the blows of human initiative and natural variation than the soggy fractal of water and earth it replaced.

Today, as sea levels rise and superstorms batter coasts with increasing ferocity, Between Land and Sea calls on the environmentally-minded to make a space in their notions of progress for impermanence and uncertainty in the natural world.

cover image and synopsis from publisher


DAVID P. HOCHFELDER


RYAN M. IRWIN


NADIESZDA KIZENKO

Carl Bon Tempo Receives Dean’s Award for Outstanding Achievement in Teaching

Associate Professor of History Carl Bon Tempo was chosen based on his sustained excellence in classroom teaching as revealed by grade-distributions, course assignments, syllabi, student comments, innovative approaches (e.g., formative assessments), and the nominee’s teaching philosophy. Sustained excellence in the supervision of students for independent study, theses, and dissertations were also important. Since arriving at UAlbany in 2008, Professor Bon Tempo has taught 5 different undergraduate courses, including a large enrollment GenEd course (History 101), and more than 5 different graduate courses. He is an active scholar, has a strong record of service to the department, has served on 15 qualifying exam committees, chaired three dissertation committees, and directed three honors theses.

His teaching philosophy is impressive, including his goal for students “to think big, to think bravely, and to think in a complex fashion.” Non-inflated grade-distributions, detailed syllabi, challenging assignments, and student comments all showed that his courses are academically rigorous and engaging. His nomination received numerous substantive letters of support from colleagues and students that detailed his excellent instructional ability. For example, a student wrote, “This is the only class (where) I could take 80 pages of notes throughout the semester and not be in the least bit angry about the crippling hand cramps.”
This volume provides a detailed analysis of language contact in North Africa and explores the historical presence of the languages used in the region, including the different varieties of Arabic and Berber as well as European languages. Using a wide range of data sets, it provides a comprehensive analysis of the mechanisms of language contact under classical diglossia and societal bilingualism, examining multiple cases of oral and written code-switching. It also describes contact-induced lexical and structural change in such situations and discusses the possible appearance of new varieties within the context of diglossia. Examples from past diglossic situations are examined, including the situation in Muslim Spain and the Maltese Islands. An analysis of the current situation of Arabic vernaculars, not only in the Maghreb but also in other Arabic-speaking areas, is also presented. This book will appeal to anyone interested in language contact, the Arabic language, and North Africa.


LOTTI SAYAHAY

TIMOTHY D. SERGAY


MARY BETH WINN


Music and Theatre
RICHARD ALBAGLI


DUNCAN CUMMING
Reviews of the CDs Troy 1428 and Centaur 3231 in American Record Guide, Fanfare Magazine, and Audio Video Club of Atlanta (May 2014)


HILARY CUMMING


SUSAN BLOOD

JEAN-FRANÇOIS BRIÈRE

CYNTHIA A. FOX

ILKA KRESSNER

UAlbany’s Newman Gives Lecture at Library of Congress

Nancy Newman, Associate Professor of Music and Chair of the Department of Music and Theatre, spoke about her research in her presentation titled, “A Program Not Greatly to Their Credit: Finding New Perspectives on the Germania Musical Society through the American Memory Sheet Music Collection.” Her talk was part of the distinguished American Musicological Society/Library of Congress Lecture Series which showcases research conducted using the extraordinary resources of the Library of Congress Music Division. The lecture was published on the LoC website in late 2014.

The Germania Musical Society forms an important link in the evolving relationship between art and popular music in nineteenth-century American life. As a touring ensemble, the orchestra offered about nine hundred concerts to nearly one million listeners from 1848 to 1854.

Newman discusses the full range of the Germans’ programs and their performances with virtuosos such as Jenny Lind, Ole Bull, and Alfred Jaëll. Their ‘mixed repertory’ concerts were typical of the ‘social orchestras’ that arose during the 1840s on both sides of the Atlantic. Newman’s analysis of more than 250 programs, culled from broadsides and serials, shows how the Germans carefully calibrated their offerings to emerging local needs and taste in the towns they visited, with audiences eventually numbering in the thousands.

adapted from AMS Newsletter

ROBERT GLUCK
Honorary Doctor of Divinity, Reconstructionist Rabbinical College (June 1, 2014).


DAVID Hosley

CHAD LARABEE


MAX LIFCHITZ


UAlbany’s Lyons Wins National Award for Diversity

From the NewsCenter (April 2015) -- Andi Lyons, director of the theatrical design and technology program at the University at Albany, recently won the United States Institute for Theatre Technology, Inc. (USITT) Joel E. Rubin Founder’s Award at the organization’s 55th Annual Conference & Stage Expo in Cincinnati.

In addition, Lyons was recently elected to the office of Vice President for Members, Sections & Chapters at USITT.

The Joel E. Rubin Founder’s Award, named for USITT co-founder and second president Dr. Joel E. Rubin, is presented to a USITT member in recognition of outstanding and continued service to the Institute.

Victoria von Arx
ASSOCIATE PROFESSOR
DEPARTMENT OF MUSIC AND THEATRE

Piano Lessons with Claudio Arrau: A Guide to His Philosophy and Techniques

Oxford University Press, 2014

Piano Lessons with Claudio Arrau provides an insider’s view of the art of piano performance as exemplified by one of the great artists of the twentieth century. Chilean pianist Claudio Arrau devoted his life to the piano and its music. As a child prodigy, he gained national recognition from government officials in Chile, including President Pedro Montt, who funded Arrau’s education in Germany. Arrau studied in Berlin with Martin Krause, a pupil of Franz Liszt, and later immigrated to New York City where he taught and mentored a sizeable group of pupils while at the same time managing an international performing career. Arrau’s profound musical insight and unique style of teaching inspired his pupils and motivated them to teach his principles to the next generation of students.

This in-depth study of Arrau’s principles and philosophy of technique and performance draws on information from published interviews with Arrau, from numerous interviews with Arrau’s pupils, and from the author’s experience in studying piano with two of them. Transcripts of actual lessons given by Arrau and preserved on tape present in his own words a detailed account of his technical and interpretive ideas about five major works of the piano repertory. References to over one hundred examples from Arrau’s filmed recordings enable readers to observe the elements of Arrau’s famed technique in action.

cover image and synopsis from publisher

Victoria von Arx
ASSOCIATE PROFESSOR
DEPARTMENT OF MUSIC AND THEATRE

Piano Lessons with Claudio Arrau: A Guide to His Philosophy and Techniques

Oxford University Press, 2014

Piano Lessons with Claudio Arrau provides an insider’s view of the art of piano performance as exemplified by one of the great artists of the twentieth century. Chilean pianist Claudio Arrau devoted his life to the piano and its music. As a child prodigy, he gained national recognition from government officials in Chile, including President Pedro Montt, who funded Arrau’s education in Germany. Arrau studied in Berlin with Martin Krause, a pupil of Franz Liszt, and later immigrated to New York City where he taught and mentored a sizeable group of pupils while at the same time managing an international performing career. Arrau’s profound musical insight and unique style of teaching inspired his pupils and motivated them to teach his principles to the next generation of students.

This in-depth study of Arrau’s principles and philosophy of technique and performance draws on information from published interviews with Arrau, from numerous interviews with Arrau’s pupils, and from the author’s experience in studying piano with two of them. Transcripts of actual lessons given by Arrau and preserved on tape present in his own words a detailed account of his technical and interpretive ideas about five major works of the piano repertory. References to over one hundred examples from Arrau’s filmed recordings enable readers to observe the elements of Arrau’s famed technique in action.

cover image and synopsis from publisher

NANCY NEWMAN


VICTORIA VON ARX


Andi Lyons


RACHEL MITCHELL

The Cambridge Rawls Lexicon

Edited with David Reidy
Cambridge University Press, 2015

John Rawls is widely regarded as one of the most influential philosophers of the twentieth century, and his work has permanently shaped the nature and terms of moral and political philosophy, deploying a robust and specialized vocabulary that reaches beyond philosophy to political science, economics, sociology, and law. This volume is a complete and accessible guide to Rawls’ vocabulary, with over 200 alphabetical encyclopaedic entries written by the world’s leading Rawls scholars. From ‘basic structure’ to ‘burdened duties’, the volume covers the entirety of Rawls’ central ideas and terminology, with illuminating detail and careful cross-referencing. It will be an essential resource for students and scholars of Rawls, as well as for other readers in political philosophy, ethics, political science, sociology, international relations and law.

Jon Mandle
PROFESSOR
DEPARTMENT OF PHILOSOPHY

ADAM ZAK


ALBIN J. ZAK


BRADLEY ARMOUR-GARB


NATHAN M. POWERS


PAUL F. B. MAGNUS


RUON A. MCCLAMROCK

Magnus, P.D., McClamrock, R. A. (2014). Friends with benefits! Distributed cognition hooks the cognitive up with the social. Philosophical Psychology, Epub.

JONATHAN MANDLE


STEINBOCK


Africana Studies

LEONARD A. SLADE JR


LOUISE M. BURKHART


Anthropology

LEE BICKMORE


JENNIFER L. BURRELL


JAMES COLLINS


MIA GALLO

Guatemala’s thirty-six-year civil war culminated in peace accords in 1996, but the postwar transition has been marked by continued violence, including lynchings and the rise of gangs, as well as massive wage-labor exodus to the United States. For the Mam Maya municipality of Todos Santos Cuchumatán, inhabited by a predominantly indigenous peasant population, the aftermath of war and genocide resonates with a long-standing tension between state techniques of governance and ancient community-level power structures that incorporated concepts of kinship, gender, and generation. Showing the ways in which these complex histories are interlinked with wartime and enduring family/class conflicts, *Maya after War* provides a nuanced account of a unique transitional postwar situation, including the complex influence of neoliberal intervention.

Drawing on ethnographic field research over a twenty-year period, Jennifer L. Burrell explores the after-war period in a locale where community struggles span culture, identity, and history. Investigating a range of tensions from the local to the international, Burrell employs unique methodologies, including mapmaking, history workshops, and an informal translation of a historic ethnography, to analyze the role of conflict in animating what matters to Todosanteros in their everyday lives and how the residents negotiate power. Examining the community-based divisions alongside national postwar contexts, *Maya after War* considers the aura of hope that surrounded the signing of the peace accords, and the subsequent doubt and waiting that have fueled unrest, encompassing generational conflicts. This study is a rich analysis of the multifaceted forces at work in the quest for peace, in Guatemala and beyond.

*Marilyn Masson*

*ASSOCIATE PROFESSOR*

*DEPARTMENT OF ANTHROPOLOGY*

**Kukulcan’s Realm: Urban Life at Ancient Mayapán**

*With Carlos Peraza Lope*  
*University Press of Colorado, 2014*

*Kukulcan’s Realm* chronicles the fabric of socioeconomic relationships and religious practice that bound the Postclassic Maya city of Mayapán’s urban residents together for nearly three centuries. Presenting results of ten years of household archaeology at the city, including field research and laboratory analysis, the book discusses the social, political, economic, and ideological makeup of this complex urban center.

Masson and Peraza Lope’s detailed overview provides evidence of a vibrant market economy that played a critical role in the city’s political and economic success. They offer new perspectives from the homes of governing elites, secondary administrators, affluent artisans, and poorer members of the service industries. Household occupational specialists depended on regional trade for basic provisions that were essential to crafting industries, sustenance, and quality of life. Settlement patterns reveal intricate relationships of households with neighbors, garden plots, cultivable fields, thoroughfares, and resources. Urban planning endeavored to unite the cityscape and to integrate a pluralistic populace that derived from hometowns across the Yucatan peninsula.

*ELAINE HILLS*  

*JULIA JENNINGS*  

*WALT E. LITTLE*  


**Marilyn A. Masson**


**Veronica Perez Rodriguez**


**Sean M. Rafferty**


**Robert M. Rosenswig**


**Lawrence M. Schell**


**Communication**

**Rosemary C. Armao**


**Nicolas Benerkeri**


**Annis G. Golden**


**Teresa M. Harrison**


**Matthew D. Matsaganis**


**ANITA POMERANTZ**


**NANCY L. ROBERTS**


**MURIEL E. SCOTT**


**TIMOTHY D. STEPHENS**


**ALAN R. ZEMEL**


**ECONOMICS**

**AMBARISH CHANDRA**


**PINKA CHATTERJI**


**BETTY C. DANIEL**


**LAURENCE J. KRANICH**


**KAJAL LAHIRI**

Invited Keynote Lecturer, The Alfred-Weber-Institute for Economics at Heidelberg University, Germany (June 21, 2014)


**ZHONGWEN LIANG**


**ALEXANDER B. BUYANTUEV**


**YOUQIN HUANG**


**SHIGOU JIANG**


**ANDREI LAPENAS**


**CATHERINE T. LAWSON**


**RUI LI**


---

**Geography and Planning

CARLOS BALSA**


Jeanette Altarriba
PROFESSOR
DEPARTMENT OF PSYCHOLOGY
VICE PROVOST AND DEAN
UNDERGRADUATE EDUCATION

Foundations of Bilingual Memory
Edited with Roberto R. Heredia
Springer Science+Business Media, 2014

Foundations of Bilingual Memory provides a valuable update to the field of bilingual memory and offers a new psychological perspective on how the bilingual mind encodes, stores, and retrieves information. This volume emphasizes theoretical issues, such as classic memory approaches, Compound-Coordinate Bilingualism, Bilingual Dual Coding Theory, and Working Memory, about which relatively little has been written in the bilingual domain. Also covered are: the neuropsychology of bilingual memory; applied issues (such as false memories and bilingualism, emotion and memory); empirical findings in support of the uniqueness of the different memory systems of the bilingual individual; connectionist models of bilingualism.

The volume represents the first book of its kind, in stressing a memory perspective with regards to bilingual speakers. It can serve as an advanced text for both undergraduate and graduate level students and it will be of great interest to the growing number of bilingual teachers and university classes interested in understanding the bilingual mind, as well as in preparing teachers to work with the bilingual individual.

cover image and synopsis from publisher


JAMES MOWER

Latin American, Caribbean, and U.S. Latino Studies

JOHANA LONDONO
Princeton-Mellon Fellowship in Architecture, Urbanism and Humanities, Princeton University and Mellon Foundation (May 2014)

PATRICIA PINHO

Psychology

JEANETTE ALTARRIBA


**DREW A. ANDERSON**


**JAMES F. BOSWELL**

Distinguished Editorial Board Member. *Behavior Therapy* (November 21, 2014). Selected as a distinguished editorial board member based on volume and “superior quality” of peer review activities for this journal.


**MITCHELL EARLYWINE**


**LAURIE B. FELDMAN**

Visiting Professor, Tubingen University. (April 2015) International research collaboration.


**MICHAEL T. FORD**

Distinguished Alumni Award, George Mason University Industrial-Organizational Psychology Student Association (April 2015)


**RONALD S. FRIEDMAN**


**CHERYL A. FRYE**


Journal of assisted reproduction and genetics, 31(12), 1647-53.

**GORDON G. GALLUP, JR.**


**ELANA B. GORDIS**


Bolles, J. R., Earleywine, M., Gordis, E. B. (2014). Acquired preparedness model and impulsivity moderated...
of marijuana use. *Addiction Research & Theory*, 22(6), 490-497.


**LESLEY F. HALPERN**


**EWAN MCNAY**

Keynote Speaker, EASD (September 2014)
TED talk invitation, TED (December 2014)

**MARK MURAVEN**


**JAMES H. NEELY**


**ANNA NEWHEISER**


**ANDREW POULOS**


**HAZEL M. PRELOW**


**JOANNA L. WORKMAN**


**DAMIAN ZULOAGA**


**Sociology**

**ELIZABETH P. BERMAN**


**PETER BRANDON**

Adam Smith Senior Research Fellow, The University of Glasgow (January 1, 2015)

**ANGIE Y. CHUNG**


Kevin Williams

**PROFESSOR**

**DEPARTMENT OF PSYCHOLOGY**

**VICE PROVOST AND DEAN GRADUATE STUDIES**

Appointed a **COLLINS FELLOW**

in 2014-15 for extraordinary devotion to this University and the people in it over a sustained period of time.
From the NewsCenter (April 2015) -- In an era of increased debate over United States immigration laws, University at Albany sociologist Joanna Dreby explores the effect of restrictive policies on children and families in her latest book Everyday Illegal: When Policies Undermine Immigrant Families.

Dreby, an award-winning author, gives a voice to families of mixed and unauthorized immigration status. The book is unique in that it interweaves Dreby’s own experiences with narratives from 81 families living in increasingly vulnerable circumstances.

Everyday Illegal takes readers directly into the homes and schools of children. It introduces “suddenly single mothers” who struggle after their husbands have been deported, while also presenting the inequalities for children who have different legal status than their siblings. Its first-hand accounts force readers to confront the impacts of immigration enforcement and deportation.

“Everyday Illegal offers insight into the experiences of young children, giving voice to their unique experiences and perspectives which are often discounted by adult debates about immigration policy,” Dreby said. “The book highlights the negative consequences of stagnant immigration policies and restrictive enforcement practices.”

Everyday Illegal is scheduled to be officially released by University of California Press on March 6. It received advanced praise by various writers including Mary Romero, who authored The Maid’s Daughter, Living Inside and Outside the American Dream.

“This beautifully written study forces us to recognize the impact of our inhumane policy and is a must-read for understanding the underbelly consequences of an immigration system that demands mass deportation and the criminalization of immigrants who want to work and provide a better life for their family in the United States,” Romero said.

At UAlbany, Dreby’s research primarily focuses on families, with specific expertise in research with Mexican migrants and with children. Her work explores the themes of gender, work-family balance, child care, transnational ties, context-specific settlement patterns and return migration.

She is the author of the award-winning book Divided by Borders: Mexican Migrants and their Children (University of California Press 2010) and is co-editor of Family and Work in Everyday Ethnography (Temple University Press 2013). She also published the award-winning article The Burden of Deportation on Children in Mexican Immigrant Families in the Journal of Marriage and Family in 2012.

What does it mean to be an illegal immigrant, or the child of immigrants, in this era of restrictive immigration laws in the United States? As lawmakers and others struggle to respond to the changing landscape of immigration, the effects of policies on people’s daily lives are all too often overlooked.

In Everyday Illegal, award-winning author Joanna Dreby recounts the stories of children and parents in eighty-one families to show what happens when a restrictive immigration system emphasizes deportation over legalization. Interweaving her own experiences, Dreby illustrates how bitter strains can arise in relationships when spouses have different legal status. She introduces us to “suddenly single mothers” who struggle to place food on the table and pay rent after their husbands have been deported. Taking us into the homes and schools of children living in increasingly vulnerable circumstances, she presents families that are divided internally, with some children having legal status while their siblings are undocumented. Even children who are U.S. citizens regularly associate immigration with illegality.

With vivid ethnographic details and a striking narrative, Everyday Illegal forces us to confront the devastating impacts of our immigration policies as seen through the eyes of children and their families. As legal status influences identity formation, alters the division of power within families, and affects the opportunities children have outside the home, it becomes a growing source of inequality that ultimately touches us all.
the Sublime, by Mark Stranger. 
Contemporary Sociology: A Journal of Reviews, 42(5), 751-753.

RICHARD W. LACHMANN

ZAI LIANG

KARYN A. LOSCOCCO

STEVEN F. MESSNER

Adapted from the NEWS CENTER (October 2014) -- University at Albany associate professor and sociologist Samantha Friedman was in Turkey on a Fulbright Scholarship this past academic year, examining residential segregation by socioeconomic status (SES) across the country’s provinces and districts and comparing it to such segregation in the United States. According to Friedman, the United States and Turkey have levels of income inequality that are higher than the world average and the study of such stratification as reflected in geographic space is an important yet understudied topic. “This is particularly the case in Turkey, where since 2002, the GDP levels have more than tripled, and Turkey has become the 16th largest economy in the world,” she said.

Such economic gains have not been distributed equally throughout the population. Friedman’s study is the first to examine residential segregation by SES across all of Turkey’s provinces and districts using data from 2000 and later, and then comparing such segregation to that in the U.S.

Friedman conducted her research at Hacettepe University, which houses the Institute of Population Studies (IPS), the top demographic research center in Turkey. IPS houses all data operations related to the Turkish Demographic and Health Survey, a nationally representative survey similar to that conducted in more than 80 countries. Scholars at the IPS conduct similar research to those associated with UAlbany’s Center for Social and Demographic Analysis, where Friedman serves on the Executive Committee. Through her Fulbright fellowship and a Memorandum of Understanding with Hacettepe University, Friedman anticipates that her project will spark future collaboration and exchanges between the two centers.

Friedman joined the UAlbany faculty in 2008 as an associate professor of sociology. She has authored more than 20 papers in leading professional journals, a book and several book chapters on racial segregation; racial and ethnic disparities in housing and neighborhood quality; and immigration. She also conducted the first study of housing discrimination against same-sex couples in the U.S., published in a report commissioned by the U.S. Department of Housing and Urban Development (HUD) last year. Friedman has been the recipient of research grants from HUD and the Eunice Kennedy Shriver National Institutes of Child Health and Human Development, among others.

Established in 1946 under legislation introduced by the late Senator J. William Fulbright of Arkansas, the Fulbright Scholar program’s purpose is to build mutual understanding between the people of the U.S. and other countries. Over its 68 years of existence, thousands of U.S. faculty and professionals have studied, taught, or done research abroad, and thousands of their counterparts from other countries have engaged in similar activities in the U.S. The Fulbright Scholar program is sponsored by the U.S. Department of State and administered by the Council for International Exchange of Scholars.
As an organizer, writer, publisher, scholar-activist, and elected official, Barbara Smith has played key roles in multiple social justice movements, including Civil Rights, feminism, lesbian and gay liberation, anti-racism, and Black feminism. Her four decades of grassroots activism forged collaborations that introduced the idea that oppression must be fought on a variety of fronts simultaneously, including gender, race, class, and sexuality. By combining hard-to-find historical documents with new unpublished interviews with fellow activists, this book uncovers the deep roots of today’s “identity politics” and “intersectionality” and serves as an essential primer for practicing solidarity and resistance.
Adapted from the NewsCenter (June and August 2015) — This summer, high school students from around the Capital Region had a unique opportunity to immerse themselves in the field of weather at a Weather & Climate Camp hosted by the University at Albany’s Department of Atmospheric and Environmental Sciences (DAES).

Students currently in grades 9 – 11 from Schenectady, Albany, Troy, Watervliet, and Rensselaer were eligible to apply for the camp that was held at the University’s main campus from August 10-14.

The clouds parted just in time for an outdoor experiment to begin at the University at Albany’s recent Weather & Climate Camp. With guidance from DAES scientists, the planned exercises included interpreting images from weather satellites and radar, learning about weather analysis and forecasting, launching a weather balloon, creating “weather” in a rotating tank, and making a cloud in a bottle.

By the end of the session, campers had learned how to measure wind, pressure, temperature, and humidity; explored the causes of climate change; learned how clouds, rain and snow form; and discovered opportunities for education and careers in the meteorology and environmental sciences.

Justin Minder, assistant professor in the University at Albany’s Department of Atmospheric and Environmental Sciences, created the camp with a five-year grant from the National Science Foundation’s Faculty Early Career Development Program. The award is given to faculty who exemplify the role of teacher-scholars through outstanding research, excellent education, and the integration of education and research within the context of the mission of their organizations.

“We have immensely talented and motivated faculty in our Department of Atmospheric and Environmental Sciences,” said DAES Chair Christopher Thornicroft, “and sharing that knowledge and enthusiasm for weather and climate with our community is an important goal for us. This camp will be the start of many more opportunities to bring young students to the University to expose them to the inner workings of our world.”

Minder partnered with high school teachers from Albany and Troy for the summer camp, which is funded through summer 2018.

The weather camp complements Minder’s study, The Mesoscale Climate Dynamics of Rocky Mountain Snowpack Depletion. Its research goal is to better understanding how the snow-cover loss in the Rocky Mountains and other mountain ranges due to global climate change leads to variations in weather and climate in, and near, the mountains.

His work will make use of state-of-the-art model simulations that are capable of demonstrating how clouds, snow, temperatures, and humidity vary over distances of just a few miles. The research will also include high-resolution satellite observations to evaluate how well climate models simulate mountain snow cover.
Atmospheric and Environmental Sciences

LANCE F. BOSART


KRISTEN L. CORBOSIERO

AIGUO DAI


OLIVER ELISON TIMM


DANIEL KEYSER

ANDREA A. L. LANG


JIPING LIU


JUSTIN R. MINDER


JOHN MOLINARI


BRIAN E. J. ROSE


PAUL E. ROUNDY


CHRIS D. THORNACROFT


RYAN D. TORN


MATHIAS VUILLE


UAlbany Scientist Garners National Science Foundation CAREER Award for Study of Oceans

From the NewsCenter (July 2015) -- University at Albany scientist Brian Rose has been awarded $544,681 through the National Science Foundation (NSF) Faculty Early Development (CAREER) Program. Rose, an assistant professor in the Department of Atmospheric and Environmental Sciences at UAlbany, will utilize the support to examine the role of oceans in the planetary energy cycles.

Rose and his research team will study ocean heat fluxes as independent climate forcings. Their goal is to better understand how and why the planetary energy budget varies in response to oceanic processes on a variety of time scales. The project will also investigate the role of ocean heat fluxes in maintaining a “super-greenhouse” effect in past warm climates.

“The oceans store and transport vast amounts of heat,” said Rose. “Patterns of sea surface heating and cooling evolve in time due to natural climate variability, transient heat uptake under global warming, and dynamic shifts in ocean heat transport. The impact of these variations on climate are largely indirect, occurring through poorly-understood changes in atmospheric processes such as water vapor transport and cloud formation that determine the radiation balance between Earth and space. Our project will broadly investigate the fundamental effects of ocean heat fluxes on the atmosphere and the climate system.”

A major aspect of the project includes the mentoring of a new generation of climate scientists, including a Ph.D. student and several undergraduates. Rose will also develop an innovative open-source software toolkit for climate modeling, and a suite of interactive educational modules leveraging this toolkit and illustrating fundamentals of climate science. These will be used in both graduate and undergraduate courses at UAlbany.

“Rose’s prestigious CAREER award is very exciting and is a significant contribution to the strong climate program that we have been developing in DAES in recent years,” said Professor Chris Thorncroft, chair of DAES.

The Faculty Early Career Development (CAREER) Program is a Foundation-wide activity that offers the National Science Foundation’s most prestigious awards in support of the early career-development activities of those teacher-scholars who most effectively integrate research and education within the context of the mission of their organization. Such activities should build a firm foundation for a lifetime of integrated contributions to research and education. NSF encourages submission of CAREER proposals from junior faculty members at all CAREER-eligible organizations and especially encourages women, members of underrepresented minority groups, and persons with disabilities to apply.

Rose came to UAlbany in 2013 as a full-time faculty hire under the University’s NYSUNY 2020 Challenge Grant. The goal was to recruit faculty in cutting-edge fields to support UAlbany’s growing academic footprint, and demonstrate the benefits for students from the increased number of faculty and staff, expanded course and research offerings, and a reduced student-faculty ratio. He is the second researcher in as many years from UAlbany’s Department of Atmospheric and Environmental Sciences to receive the prestigious CAREER award through NSF.

In March 2014, Assistant Professor Justin Minder received a CAREER award to study the role of snow-albedo feedback in regional climate change over mountainous terrain. The grant also funded a summer weather/climate science camp for local urban high school students, which was held in August.
foothills of Peru related to the South American Monsoon System during the last 1600 years. *Climate of the Past, 10*, 1967-1981.


**JUNHONG WANG**


**LIMING ZHOU**


**Biological Sciences**

**PAUL F. AGRIS**


**MARLENE BELFORT**


**PERSICARIA PERFOLIATA**


**HAIJUN CHEN**

**SHIGUO JIANG**


**GARY S. KLEPPLE**


**MELINDA LARSEN**


**GEORGE ROBINSON**


An international team of scientists led by University at Albany Distinguished Professor of Chemistry Eric Block, have demonstrated that the vibrational theory of olfaction, one of the two major theories explaining how the sense of smell functions, is not plausible. Published in the Proceedings of the National Academy of Sciences, the research compared the reactivity of muscone (the major component of musk fragrance, used in most perfumes) and its counterpart with all hydrogen atoms replaced by the heavy hydrogen isotope deuterium, toward the human musk olfactory receptor. The researchers found that the receptor responded identically to the two compounds, which is counter to expectations for the vibration theory, since carbon–deuterium bonds have very different vibrational frequencies than carbon–hydrogen bonds.

The vibration theory of olfaction suggests that a molecule's smell is based on its vibration frequency, similar to how color is interpreted through different frequencies of light. In addition to Block, the other corresponding authors include Queens College-CUNY Professor Seogjoo Jang, Duke University Associate Professor Hiroaki Matsunami, and Shanghai Jiao Tong University Associate Professor Hanyi Zhuang.

The team obtained similar results with 25 other pairs of deuterated/undeuterated compounds when responding to their specific olfactory receptors. The vibration theory is based on the premise that just as in the sense of sight, wavelength translates into color, and in the sense of hearing, frequency translates into pitch, the sense of smell depends on molecular vibrations of odor molecules.

Other work by the cohort revealed flaws in the theoretical basis of the vibration theory. The team also clarified aspects of the second major theory of olfaction, termed the "shape theory of olfaction," which suggests that steric aspects of odorants are central in the so-called "hand-in-glove" or "lock and key" interaction of odors with odorant receptors. The researchers argue that in fact the entire range of interactions between molecules, both attractive and repulsive rather than just shape, come into play when odorants interact with their receptors, ultimately triggering perception of the odor.

This research is significant since humans can distinguish billions of odors. In animals, the sense of smell is an essential sense for detection of predators and other dangers, food sources, and mates. Other coauthors include Bérénice Dethier, Sivaji Gundala, Stephene N. Lodge, and Sonia Flores Penalba from UAlbany, Sivakumar Sekharan, Mehmed Z. Ertem, Mehmet Ozbil, and Victor S. Batista from Yale University and Yi Pan, Shengji Li, Zhen Li, and Huihong Jiang from Shanghai Jiaotong University.

In the U.S. the research was funded by the National Science Foundation, the National Institutes of Health and the Department of Energy.

Other coauthors include Bérénice Dethier, Sivaji Gundala, Stephene N. Lodge, and Sonia Flores Penalba from UAlbany, Sivakumar Sekharan, Mehmed Z. Ertem, Mehmet Ozbil, and Victor S. Batista from Yale University and Yi Pan, Shengji Li, Zhen Li, and Huihong Jiang from Shanghai Jiaotong University.

In the U.S. the research was funded by the National Science Foundation, the National Institutes of Health and the Department of Energy.


BEN G. SZARO


ING-NANG WANG


Chemistry
ERIC BLOCK


Featured in:


EVENGY DIKAREV


DANIELE FABRIS


GERD-UWE FLECHSIG


JAN HALAMEK


of confidence. *Analytical and Bioanalytical Chemistry*, 406(14), 3365-3370.

**COLIN HENCK**


**IGOR K. LEDNEV**


**RABI A. MUSAH**


**LI NIU**


**MARINA A. PETRUKHINA**


**MAKSIM ROYZEN**

bio-orthogonal reaction of trans-cyclooctene and tetrazine. *Chemical Communications*, 50(58), 7844-7847.

**CHARLES SCHOLES**


**ALEXANDER SHEKHTMAN**


**JASON R. E. SHEPARD**


**PAUL J. TOSCANO**


**ZHENG WEI**


**JOHN T. WELCH**


**MEHMET V. YIGIT**


Mathematician’s Research Funding Hits the Decade Mark

In the arcane world of higher mathematics, rare is the mathematician whose research is funded, and even rarer is the mathematics researcher who is continuously funded for 10 years.

But University at Albany professor of mathematics Cristian Lenart will not, ironically, calculate those odds. He is simply happy to be that researcher.

Lenart received a fourth award from the National Science Foundation, marking continuous NSF funding since 2004 to research the development of computational models, based on combinatorial structures, for various areas in algebra and geometry. The funding has also allowed the support of numerous doctoral students as research assistants.

“At the very heart of mathematics,” he said, “lies the study of certain geometric objects, such as algebraic varieties and topological spaces. This study is usually very hard, and mathematicians associate certain algebraic structures to the geometric ones. It is here that combinatorics comes into the picture.”

Combinatorics, Lenart explained, can be described as the study of arrangements of objects according to specified rules. Usually, simple rules give rise to complex discrete structures, such as various types of puzzles, but it turns out that combinatorial objects are particularly well-suited for encoding complex algebraic or geometrical objects, while combinatorial methods are well suited for related computations.

Lenart spent the 2013-14 academic year at the prestigious Max Planck Institute for Mathematics in Bonn, where his productive year included writing several research papers and delivering 14 talks, mostly in Europe. He received the (SUNY) Chancellor’s Award for Excellence in Scholarship and Creative Activities, and, to cap it off, celebrated his 15th year at the University at Albany.

“Dr. Lenart’s research has inspired a decade of students, and this rare and continuous funding from the NSF has allowed them to exercise their creativity in a successful, inspired mathematics lab,” said College of Arts and Sciences Dean Edelgard Wulfert.

“The first thing mathematicians hear when revealing our profession, is, ‘Wow, math was my worst topic in school, how can you do that?’ Lenart said. “We do that because we find it fascinating. When certain structures have a minimal chance to fit together in a certain beautiful way, and we realize that they still do, we want to understand the deeper reasons for which this happens. In this way, we are led to the discovery of new aspects of reality. And whenever we get support for our research, it is more than personal success, it is also a success of our department, college, and university. Any award brings math visibility, attracts students to study it, and narrows the gap between the way in which it is perceived, and the satisfaction they have when getting involved in it.”

Mathematics and Statistics

IVANA ALEXANDROVA

Dr. Nuala McGann Drescher Award, NYS/UUP Joint Labor-Management Committees (September 1, 2014)


LINDSAY N. CHILDS


BORIS GOLDFARB


MARTIN V. HILDEBRAND


CRISTIAN-PAUL LENART


Prof. Cristian Lenart

ANTUN MILAS


ELIZABETH MUNCH


R. MICHAEL RANGE

MICHAEL I. STESSIN

ALEXANDRE B. TCHERNEV

RONGWEI YANG


YIMING YING


KEHE ZHU


PHILIP GOYAL


VIVEK JAIN

ALEXANDER KHMALADZE

KEVIN H. KNUTH


PHILIP GOYAL


VIVEK JAIN

ALEXANDER KHMALADZE


OLEG LUNIN

CAROLYN MACDONALD


PETRUCCELLI

Anthropology

MARILYN MASSON
REU: Changing Agrarian Foundations of Urban Life: A Long-Term Perspective-Aleta Dellenback
National Science Foundation
3/10/2015 - 5/31/2016
$186,886

SEAN RAFFERTY
Northeast Anthropology Journal
Multiple Sponsors
9/15/2004 - 9/15/2015
$151,805

ROBERT ROSENSWIG
Izapa Regional Settlement Project-Phase 2
National Science Foundation
7/1/2014 - 6/30/2016
$25

Las Viudas and the Late Formative Political Organization of the Socouso, Mexico
National Geographic Society
5/22/2015 - 12/31/2015
$110,000

DAVID STRAIT
Collaborative Research: Integrative Analysis of Ingestive Biomechanics and Dental Microwear Using Capuchins as a Model Organism
National Science Foundation
9/15/2014 - 8/31/2017
$1,800

KEVIN WILLIAMS
Graduate Research Fellowship Award-Rebecca Mendelsohn
National Science Foundation
$20,765

Atmospheric and Environmental Sciences

LANCE BOSART
An Investigation of the Skill of Week Two Extreme Temperature and Precipitation Forecasts at the NCEP-WPC
National Oceanic and Atmospheric Administration
5/1/2015 - 4/30/2017
$224,999

High Plains Convection: Diurnally Varying Mesoscale-Synoptic Scale Interactions over Complex Terrain During
National Science Foundation
11/1/2012 - 10/31/2015
$123,181

Utilizing NASA Reconnaissance Assets to Investigate Hurricane Upper-Level Warm Core Evolution, Inner Core Pulsing, and Near-Environment Moisture Interactions
NASA Earth Science Enterprise
7/1/2012 - 6/30/2015
$20,000

KRISTEN CORBOSIERO
Collaborative Research with the National Weather Service on the Occurrence and Predictions of High-Impact Precipitation Events in the Northeastern United States
National Oceanic and Atmospheric Administration
9/1/2013 - 8/31/2014
$125,000

Co-Investigators: Lance Bosart, Daniel Keyser, Ryan Torn, Andrea Lang, Brian Tang

AIGUO DAI
Collaborative Research to Narrow Uncertainties in Precipitation and the Hydrological Cycle in Climate Models
US Department of Energy
8/15/2014 - 8/14/2015
$121,150

EVERETTE JOSEPH
Department of Commerce NOAA Scientific and Technical Support
National Oceanic and Atmospheric Administration
$25,000

JIPING LIU
Development of Satellite-Based Surface Fluxes of Heat and Moisture in the Arctic Ocean for Understanding Impacts of Changing Arctic Environments
National Oceanic and Atmospheric Administration
8/1/2014 - 7/31/2015
$92,125

JUSTIN MINDER
EAGER: Collaborative Research: Chilean Coastal Orographic Precipitation Experiment Pilot Project (CCCOPE-2015)
National Science Foundation
$84,075

JOHN MOLINARI
Mechanisms of Intensity Change in Sheared Tropical Cyclones
National Science Foundation
3/15/2015 - 8/28/2018
$161,112
Outflow Layer Dynamics and Thermodynamics and Tropical Cyclone Intensity Change  
US Navy Office of Naval Research  
1/1/2014 - 12/31/2016  
$239,915  
BRIAN ROSE

CAREER: Understanding the Role of Oceans in the Planetary Energy Balance  
National Science Foundation  
7/1/2015 - 6/30/2020  
$544,681  
PAUL ROUNDY

Precursor Conditions to Onset and Breakdown of Agricultural Drought over the United States Corn Belt Region  
National Oceanic and Atmospheric Administration  
9/1/2014 - 8/30/2017  
$75,000  
CHRISTOPHER THORNCROFT

Supplement: Analysis of the Influence of Conectively Coupled Atmospheric Waves and Extratropical Rossby Waves on the Structure and Evolution to the Observed Madden Julian Oscillation (MJO)  
National Science Foundation  
11/15/2011 - 10/31/2015  
$12,000  
OLIVER ELISON TIMM

Investigation of Historical Rainfall Trends and Possible Future Changes in the Frequency of Extreme High and Low Rainfall in Hawaii: The Influence of El Nino-Southern Oscillation and Pacific Decadal Oscillation on Secular Rainfall Variations in Hawaii  
US Army Research Development & Engineering Command  
12/30/2013 - 12/31/2014  
$9,027  
RYAN TORN

Assessing the Predictability of Tropical Cyclone Intensity Using HWRF  
National Oceanic and Atmospheric Administration  
8/1/2014 - 7/31/2015  
$200,000  
Sources and Growth of Initial Condition Errors in Convection-Resolving Forecasts in MPEX  
National Science Foundation  
11/1/2012 - 10/31/2015  
$107,679  
Using NOAA Unmanned Aircraft Systems Assets to Investigate Tropical Cyclone Track, Intensity Change, and Cirrus Canopy Structure  
National Oceanic and Atmospheric Administration  
8/1/2014 - 7/31/2017  
$99,606  
MATHIAS VUILLE

High-Resolution Reconstruction of the South American Monsoon History From Isotopic Proxies and Forward  
National Science Foundation  
8/1/2013 - 8/31/2016  
$58,330  
BIological Sciences

PAUL AGRIS

Benton Dickinson RNA Institute Research Agreement  
Becton, Dickinson & Company  
$77,617  
Collaborative Research: Sequence Selective Recognition of Double-Standard Non-Coding RNA via Triplex Forming  
National Science Foundation  
8/1/2014 - 7/31/2017  
$484,785  
PRASHANTH RANGAN

RNA Modification: Structure and Mechanism  
National Institutes of Health  
9/15/2014 - 8/31/2015  
$189,500  
MARLENE BELFORT

Self-Splicing Inteins: Function, Evolution, Application  
National Institute of General Medical Sciences  
7/1/2012 - 6/30/2016  
$400,117  
ELISE GERVAIS

PAR-1b in Integrin Localization and Laminin-111 Assembly in the Salivary Gland  
National Institutes of Health  
$203,181  
HELMUT HIRSCH

QTL and Microarray Mapping Lead Sensitivity Genes  
National Institutes of Health  
$60,814  
MELINDA LARSEN

Engineering Functional Salivary Glands Using Micropatterned Scaffolds  
National Institute of Dental & Craniofacial Research  
7/1/2015 - 6/30/2016  
$9,500  
Integrin Intracellular Function  
National Institute of General Medical Sciences  
4/1/2015 - 1/31/2016  
$11,000  
PAN TX LI

REU: Investigate Interactions between the Retroviral DIS Hairpins  
National Science Foundation  
2/1/2011 - 1/31/2016  
$2,464  
CARA PAGER

The Role of RCK/p54 in HCV Gene Expression  
American Association for the Study of Liver Disease  
7/1/2015 - 6/30/2016  
$146,523  
PRASHANTH RANGAN

Defining an RNA Structural Code for Immortality  
Pew Charitable Trusts  
8/1/2014 - 7/31/2019  
$7,642
Transient Transcriptional Silencing in Stem Cell Differentiation in Drosophila
National Institutes of Health
8/1/2014 - 7/31/2015
$10,500

ING-NANG WANG
Phylogeographic Dynamics of a Vector and Pathogen in a Natural Environment
National Institutes of Health
12/1/2014 - 11/30/2015
$9,750

The Evolution of Bacteriophage Life History Traits
National Institutes of Health
7/12/2012 - 5/31/2016
$243,393

DANIEL L WULFF
FY 2015 Upstate New York JSHS Academy of Applied Sciences
9/1/2014 - 8/31/2015
$82,735

Science Research in the High School Program-Teacher Workshops
Multiple Sponsors
7/16/2009 - 8/15/2015
$1,319,204

Support for Junior Science & Humanities Symposium (JSHS)-University in High School Program
Multiple Sponsors
2/16/2012 - 2/15/2016
$15,575

Chemistry
ERIC BLOCK
Periphal Odor Coding in Mammals
National Institutes of Health
4/1/2015 - 3/31/2016
$86,528

ALAN CHEN
Physics Based RNA 3D Structure Prediction
PhRMA Foundation
1/1/2015 - 12/31/2015
$70,412

IGOR LEDNEV
Raman Spectroscopy for Analyzing Body Fluid Traces: Moving Towards a Practical Forensic Application
National Institute of Justice
1/1/2015 - 12/31/2017
$25,531

RABI MUSAH
Acquisition of an Ambient Ionization Mass Spectrometer for Research and Teaching
National Science Foundation
8/1/2014 - 7/31/2017
$153,322

LI NIU
SUNY Albany Network of Excellence Award- Advanced Materials for an RNA Hydrogel
Research Foundation of the State University of New York
7/1/2014 - 6/30/2015
$29,506

MARINA PETRUKHINA
Advanced Carbon Nanocomposites for Supercapacitor Energy Storage
Research Foundation of State University of NY
5/1/2015 - 4/30/2016
$72,000

SUNY System Administration
7/1/2014 - 12/31/2014
$110,000

New Class of Organometallic Single-Ion Molecular Magnets
American Chemical Society
6/1/2015 - 8/31/2017
$100,000

Recharging and Reshaping Buckybowls
National Science Foundation
9/1/2012 - 8/31/2015
$22,000

Synthesis of Organometallic Lewis Acids for Doping of Organic Semiconductors
Siemens Electrom GMBH & Company
6/1/2014 - 12/31/2015
$682,412

RAMASWAMY SARMA
National Science Foundation
6/1/2015 - 5/31/2016
$9,200

English
LAURA WILDER
Investigating the Impact of First Year Composition: A Comparative Study on One Campus
National Council for Teachers of
Dr. Angie Y. Chung, Sociology, will investigate the role of immigrant entrepreneurs in promoting urban (re)development projects in Monterey Park, California, and the Koreatown neighborhood of Los Angeles, which contain enclaves of Chinese and Korean immigrants, respectively. The findings from Dr. Chung's research may help local government officials and policymakers work better with immigrant leaders on issues of economic development and devise strategies for balanced growth that could reduce overdevelopment, environmental damage and interracial conflict.

Professor Chung is an urban sociologist with a focus on immigration, transnationalism, race and ethnicity, gender and family, and Asian and Asian American Studies. Her present research examines the political incorporation of pro-growth coalitions made up of immigrant entrepreneurs, political leaders, large-scale developers, and transnational investors from the Pacific Rim that have built their fortunes around luxury condos, office buildings, high-end restaurants, and other profitable ventures in fast-growing ethnic enclave economies. The project will evaluate how such economic development in these ethnic communities have impacted workers and residents, in terms of the commercialization of culture, the privatization and fortressing of public spaces, environmental damage, and heightened segregation between the rich and the poor.

The findings from the proposed study are expected to advance our knowledge of the new immigrant elites and transnational players who are driving the processes of urban (re)development and the resulting political changes amidst white flight and racial/ethnic transition since the 1960s. The project will shed light on how the politics of land use, investment and development are becoming increasingly linked to economies beyond our nation's borders as a result of real estate investment from overseas, and how this may delocalize decision-making processes away from municipal governments and complicate local growth control efforts.

The study is funded by a $137,000 grant from the National Science Foundation and involves a collaboration with co-investigators Dr. Jan Lin of Occidental College and Dr. Sookhee Oh of the University of Kansas City – Missouri. Professor Chung will spend this summer at the CUNY Graduate Center as a Visiting Research Scholar before moving to the University of California – Los Angeles for the Fall 2015 semester. She will conduct interviews and participant observation as a visiting researcher at UCLA's Asian American Studies Program.
**Mathematics and Statistics**

**IVANA ALEXANDROVA**
Scattering Theory, Semi-Classical Analysis, and the Aharonov-Bohm Effect  
Simons Foundation  
9/1/2013 - 8/31/2014  
$7,000

Scattering Theory, Semi-Classical Analysis, and the Aharonov-Bohm Effect  
Simons Foundation  
9/1/2014 - 8/31/2015  
$7,000

**CRISTIAN-PAUL LENART**
Representation Theory and Schubert Calculus: Combinatorics and Interactions  
National Science Foundation  
9/1/2014 - 8/31/2017  
$160,000

**Physics**

**PHILIP GOYAL**
An Information-Theoretic Approach to Identical Particles in Quantum Theory  
Foundational Questions Institute  
9/1/2014 - 8/31/2015  
$41,391

**TS KUAN**
GRC Graduate Fellowship Program-Pre Doc Fellowship  
Semiconductor Research Corporation  
9/1/2011 - 8/31/2015  
$74,871

**OLEG LUNIN**
Black Holes and Gauge/Gravity Duality  
National Science Foundation  
8/15/2013 - 7/31/2016  
$39,997

**Psychology**

**KRISTIN CHRISTODULU**
CARD Albany and NYS Regional Centers for Autism and Spectrum Disorders  
NYS Education Department  
7/1/2014 - 6/30/2015  
$1,098,870

CARD Workshops Misc Support  
Multiple Sponsors  
1/1/2008 - 5/15/2015  
$27,350

**Sociology**

**ANGIE CHUNG**
Politics and Immigrant Growth Machines in Koreatown and Monterey Park  
National Science Foundation  
4/15/2015 - 3/31/2017  
$59,084

**ZAI LIANG**
The Adaptation Process of African Merchants in Guangzhou: The Roles of Church/Mosque and Foreigner Service Centers  
Chiang Ching Kuo Foundation  
7/1/2015 - 6/30/2017  
$65,187

Visiting Scholar Appointment  
Russell Sage Foundation  
9/1/2014 - 6/30/2015  
$51,339

**GLENN DEANE**
Development of a Supplemental Instructional Course in Reading and Writing Arguments for Ninth Graders at Risk of Leaving School before Graduating  
Institute of Education Sciences  
8/1/2014 - 7/31/2015  
$65,484

**SCOTT SOUTH**
Leaving and Returning Home in the 21st Century  
National Institutes of Health  
1/1/2015 - 12/31/2015  
$137,314

**KATE STRULLY**
Social Contexts, Sexual Networks, and Racial-Ethnic Disparities in STDs  
National Institutes of Health  
8/1/2010 - 7/31/2015  
$30,000
From the News Center (March 2015) -- University at Albany biophysicist Alan Chen is at work creating a new model to accurately predict structures of RNA. If effective, this methodology would alleviate a significant roadblock to RNA-based drug discovery, which holds great promise for various hard-to-treat diseases, better antiviral therapies against RNA viruses, and new classes of antibacterial compounds.

Funded by a grant from the Pharmaceutical Research and Manufacturers of American Foundation (PhRMA), Chen is advancing technology he initially developed in 2013 as a post-doc at Rensselaer Polytechnic Institute with RPI Professor Angel Garcia to predict structures that include potential drug targets in RNA viruses and small molecule binding RNA “aptamers.”

PhRMA supports early career development for scientists involved in research relevant to drug discovery and development. Though supported by manufacturers, PhRMA’s grant to Chen is for basic research. A member of UAlbany’s Department of Chemistry, Chen seeks to accomplish what traditional methods of modeling RNA have not.

Existing knowledge of drug design is almost entirely based on the assumption that the biological targets are proteins. Although modern computer simulations are able to accurately predict the three-dimensional (3D) folds of proteins, there have been comparatively few such successes for the 3D structure of RNAs. The advance Chen and Garcia made at RPI improved on protein-centric models, resulting in correct prediction of the structure of several small RNA tetraloops without relying on any knowledge of the final structure — a truly accurate “prediction.”

In a typical drug-discovery project, the first step is to establish a likely biological target that should have a therapeutic effect if drug-treated, then determine its structure to a high resolution (i.e. angstrom — 1/10 billionth of a meter) level. The next step is to find or design a 3D molecule that is complimentary to the biological target, hoping that a therapeutic effect will occur when they recognize each other.

“A drug binding to any old part of a target molecule doesn’t necessarily induce a therapeutic effect,” said Chen. “It has to be a special, functionally crucial part. Therefore you need a combination of high-resolution structural information as well as functional information in order to design a drug that results in a therapeutic effect upon administration.”

For proteins, there are a variety of well-established methods to determine the structure to angstrom-level resolution, but for RNA these methods are extremely difficult, with researchers often devoting years to determine a single RNA structure. Even then, many RNAs of biological interest cannot be predicted by these methods.

“So even though there is this recent explosion in RNA biology and many clever new ways to measure the biological function of RNAs, we are literally fumbling in the dark when it comes to understanding what they actually look like in 3D to the level of detail required to design a therapeutic drug that could bind to it and alter its function,” said Chen.

His models represent every individual atom of the RNA as well as that of the surrounding biochemical environment, such as water and electrolytes. In principle, the accuracy of these models would require only the genetic sequence of the target RNA as input — easily obtainable by modern gene sequencing techniques. He stresses, however, that even if successful this will be but the first step in a long road toward actually developing RNA-based drugs.

“Even if we can develop a molecule that fits into an RNA’s specific shape, this does not guarantee it will have the desired biochemical/biological effect, that the hypothetical molecule can actually be synthesized efficiently in real life, that it can be efficiently delivered to the target in-vivo, or that it can be administered without adverse side effects to the patient, etc. These are all important concerns that would have to be addressed down the line by researchers once the technology is mature.”

Chen noted that a key component of his grant proposal that impressed reviewers was the quality and diversity of his experimental collaborators at The RNA Institute. “They are able to directly test the results of my computational predictions using state-of-the-art analytical methods, both in the test-tube and even in living cells and model organisms — all utilizing our in-house expertise represented by the cutting edge RNA research going on here.”