

Board Meeting
January 23, 2014

APPOINT ASSOCIATES TO THE
CENTER FOR ADVANCED STUDY, URBANA

Action: Appoint Associates to the Center for Advanced Study for the Academic Year 2014-15

Funding: State Appropriated Funds

Each year the Center for Advanced Study awards appointments as Associates in the Center, providing one semester of release time for creative work. Associates are selected in an annual competition from the faculty of all departments and colleges to carry out self-initiated programs of scholarly research or professional activity.

The Chancellor, University of Illinois at Urbana-Champaign, and Vice President, University of Illinois recommends the following list of Associates selected for the 2014-15 academic year, and offers a brief description of their projects:

Antonios Augoustakis, Associate Professor, Classics *Death and Ritual in Flavian Epic*

Death and Ritual in Flavian Epic is the first monograph that provides a systematic analysis of scenes of death and burial in the three epic poems of the Flavian period (Silius Italicus' "Punica," Statius' "Thebaid," and Valerius Flaccus' "Argonautica"). By drawing on various modern studies on religion and ritual and the relationship between literature and religion in the Greco-Roman world, this book asks questions about the role of death, lament, funeral, and burial as represented in the poetry of the Flavian age, seeking to offer a broad understanding of the socio-political and cultural background of the poems and their period.

Robert Brunner, Associate Professor, Astronomy, *Accelerating the Fourth Paradigm: Data Intensive Astronomical Research*

The explosion of data across a wide range of disciplines has created a new paradigm of research--data intensive scientific discovery. This project will promote this new paradigm of knowledge discovery in massive data by developing new, probabilistic classifications and applying these to the analysis of large astronomical data sets.

Jianjun Cheng, Associate Professor, Materials Science and Engineering, *In Vivo Targeting via Bioorthogonal Chembody/Chemgen Technology*

Antibody/antigen interaction is widely used for targeting in vivo, but has several key drawbacks, such as the large size, immunogenicity, and difficulty of production and handling of antibodies. This proposed study will develop an unprecedented and transformative technology, namely Chembody/Chemgen to facilitate in vivo targeting of interested organs, tissues or cells with high specificity and efficiency through covalent conjugation chemical reaction.

Wendy Cho, Professor, Political Science, *A Computational Approach to Redistricting Reform*

This study will approach redistricting from a non-legal perspective. Rather than proposing regulations intended to constrain map-making, a tool to illuminate and open up the redistricting process will be proposed. An accessible computational tool that provides access to relevant data and enables users to explore the universe of possible redistricting plans would engage a much broader array of interested citizens and make the process eminently more fair and transparent.

Karin Dahmen, Professor, Physics, *Unifying theory of universal quake statistics: from nanocrystals to earthquakes*

Collapsing bridges, earthquakes, snow avalanches, and power-grid failures are all examples of dangerously large fluctuations in systems responding to small forcing, on scales spanning 13 decades in length, from the atomic to the tectonic. This project will develop and test a unifying theory that predicts the statistics of these fluctuations, in slowly-compressed solids and related systems, and to develop new materials-testing methods to predict and, if possible, prevent catastrophic failure events in solids and a wide range of other systems exhibiting avalanches.

Augusto Espiritu, Associate Professor, History, *“El legado de España”: The Discourse of Hispanism in Cuba, Puerto Rico, and the Philippines in the American Empire*

This research focuses on how nationalist intellectuals from Cuba, Puerto Rico, and the Philippines utilized the discourse of "Hispanismo" through forms of affective, pro-Spanish discourse, as a mode of questioning, accommodating to, or resisting the U.S. empire during the first half of the twentieth century. This work will help lead to an understanding of the rise of “Hispanics” in the U.S., America’s complex relationships with much of the postcolonial world, and the potential dialogues about the overlapping heritage of the Spanish and U.S. empires for Cuba, the Philippines, and Puerto Rico at home and in the diaspora.

Kevin Ford, Professor, Mathematics, *Sharp bounds for small moments of multidimensional Weyl sums*

This project will extend and adapt recently developed innovative techniques to analyze integer solutions of special systems of equations known as Vinogradov's systems, to greatly improve bounds for more general types of systems. The systems under consideration possess a certain symmetry and other special structures, and the goal is to prove that the number of solutions is small whenever the number of variables in the system is also small.

Eduardo Fradkin, Professor, Physics, *Topological Order and Symmetry Breaking in Condensed Matter Physics*

The purpose of this research is to develop the theory of the interplay of topological order and symmetry breaking in condensed matter physics. The development of the theory of electronic liquid crystal phases in strongly correlated electronic systems will also be completed.

Areli Marina, Associate Professor, Art History, *Sanctified in Water, Sealed in Stone: The Italian Baptistery 1000-1600*

Although the freestanding Christian baptistery building is rare elsewhere in Europe, more than 80 of them were built in Italy from the eleventh through the fifteenth centuries. This study presents a new answer to this persistent scholarly puzzle: it is the product of Italy’s peculiar ecclesiastical and political fragmentation and its tradition of architectural patronage, not liturgical eccentricity or political self-assertion on the part of its city-states.

Faranak Miraftab, Professor, Urban and Regional Planning, *Making a Home in the Heartland: Immigration and Global Labor Mobility*

This project is about rapid demographic change in Beardstown, IL, the formerly all-white town where Cargill Corporation recruited West African and Latin American immigrant labor for their meat-packing plant. Using a multi-sited ethnography (in Illinois, Togo, and Mexico), the project uncovers (a) processes that produce immigrant workers who end up in Illinois—namely dispossession and displacement; (b) practices of transnational care work that allow these workers to stay in high-risk, low-pay jobs—namely the global restructuring of social reproduction; and (c) the specificities of local context that facilitate the ability of diverse populations to renegotiate their inter-racial and inter-immigrant social dynamics outside the workplace in residential neighborhoods, schools, and public spaces.

Thomas Nevins, Associate Professor, Mathematics, *Research in Geometric Representation Theory*

This research explores an emerging paradigm that links microlocal D-modules and generalizations to exciting recent developments in symplectic geometry, geometric representation theory, and string theory. The proposed work is timed to take advantage of a thematic program at the Mathematical Sciences Research Institute in Berkeley, California.

Catherine Prendergast, Professor, English, *Writer, Painter, Banker, Thief: The American Arts Colony in the Public Account*

Writer, Painter, Banker, Thief offers a history of the founding of the oldest American literary, musical, and visual arts colonies—Yaddo, MacDowell, Byrdcliffe, and Carmel-by-the-Sea—focusing on their struggles with their immediate neighbors. While annoying to the Gilded Age founders of these colonies, this project argues that their rural neighbors' demands that colonies account for their purpose and wealth paradoxically helped each colony to fulfill its promise.

Leslie Reagan, Professor, History, *Agent Orange: The Cultural History of a Reproductive Hazard in the United States and Vietnam*

Scientists continue to dispute whether the herbicide Agent Orange is responsible for terrible damage to the environment and human health, yet American Vietnam War veterans receive benefits if they were exposed and the U.S. government has agreed to fund disabilities programs in Vietnam. This research into the cultural and political impact of Agent Orange finds it was the response to the herbicide's reproductive effects that particularly galvanized domestic and transnational social movements and won these services in spite of scientific and corporate opposition.

Valeria Sobol, Associate Professor, Slavic Languages and Literatures, *The Haunted Empire: The Russian Literary Gothic and the Imperial Uncanny, 1793-1844*

This book argues that in Russian literature the Gothic mode served as a particularly apt form for the experience of “the imperial uncanny”—a sense of danger and uncertainty in an ambiguous colonial space within Russia’s borders. Unlike the prevailing view that regards the Russian Gothic as an imitation of the popular Western form, this project reconceptualizes this body of literature as a key genre that dramatizes uniquely Russian imperial anxieties and concerns and offers a powerful critique of the empire

Mara Wade, Professor, German Languages and Literatures, *Emblematic Practices: Emblems and Culture in Early Modern Germany*

This project seeks to frame a new study with the tentative title “Emblematic Practices,” by studying the book emblems as presented in Emblematica Online through the lens of cultural practices in early modern Germany. The study comprises five core chapters and at least one white paper reflecting on digital humanities and new modes of scholarship.

James Whitfield, Professor, Entomology, *Testing of new phylogenetic network methods with appropriate empirical biological data sets*

Phylogenetic networks form a rapidly expanding and relatively new class of analytical methods that promise to broaden our view of how organisms evolve. This project is aimed towards meeting the challenge of properly testing these developing methods by providing targeted, appropriate, and real biological datasets.

David Wright, Associate Professor, English, *All the Best Things Thus (a novel)*

In 1818, the Dahomeyan king Adandozan, ruler of the stretch of West Africa known as the Slave Coast, was “destooled” and banished for attempting to shift the economy away from the trade in human chattel for what he saw as more stable product, palm oil, used worldwide to grease the machinery of the Industrial Revolution. It was not permitted to speak his name aloud again and Dahomey continued trading in slaves for another seventy-five years, until the colonizing French overthrew the dynasty. This proposed project, *All the Best Things Thus (a novel)*, will recover the forgotten story of Adandozan as a way to explore the complicated and complicitous role that Africans played in the trans-Atlantic slave trade.

The Board action recommended in this item complies in all material respects with applicable State and federal laws, *University of Illinois Statutes*, *The General Rules Concerning University Organization and Procedure*, and Board of Trustees policies and directives.

The Vice President for Academic Affairs concurs.

The President of the University recommends approval.