

Board Meeting
January 16, 2020

APPOINT ASSOCIATES TO THE CENTER FOR ADVANCED STUDY, URBANA

Action: Appoint Associates to the Center for Advanced Study for the Academic Year 2020-2021

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 tenured 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 2020-2021 academic year, and offers brief descriptions of their projects:

Christina Bashford, Associate Professor, Musicology, *Forgotten Voices, Hidden Pleasures*

This project will bring about the completion of Professor Bashford's history of the practical and conceptual presence of the instruments of the violin family in Britain, 1870-1930. Treating amateur and professional traditions of playing, collecting, and making string instruments, her book *Forgotten Voices, Hidden Pleasures* rehabilitates a significant "grass roots" musical culture in Britain through broad historical analysis, arguing that the spread and vitality of "violin culture" had a systemic, democratizing, and lasting impact on the country's music-making.

Eric Calderwood, Associate Professor, Comparative & World Literature, *The Invention of al-Andalus: Uses of the Past in Contemporary Culture*

This book project explores contemporary representations of al-Andalus (medieval Muslim Iberia) in literature, film, television, music, and tourism from several different cultural and geographic contexts, including Spain, Morocco, Egypt, Syria, Lebanon, Israel/Palestine, and the United States. It offers a multilingual and transnational account of the various understandings of al-Andalus in contemporary culture, and it also challenges a tradition of scholarship that has treated al-Andalus as a symbol of cross-cultural understanding while, at the same time, ignoring the voices of contemporary Arab and Muslim authors, artists, and scholars.

Xiaohui Chen, Associate Professor, Statistics, *Statistical Optimal Transport and Geometric Data Analysis*

The proposed project focuses on investigating statistical optimal transport for large-scale and complex data with geometric features. The proposed research is expected to provide key enabling technologies for high-impact applications in machine learning and image processing.

Julie Cidell, Professor, Geography, *Sedimentation of Flows: The Des Plaines-Kankakee Confluence and Spaces of Distribution*

This book project is a historical geography that examines the Des Plaines-Kankakee confluence, approximately fifty miles from downtown Chicago, as a local space of distribution with global significance. The book considers how layers of flows of people, goods, energy, among others, build upon each other over time, producing a sedimented landscape not unlike the sedimented layers of the rivers that demarcate those landscapes.

SungWoo Nam, Associate Professor, Mechanical Science & Engineering, *Single Quantum Emitters Based on Atomically-Thin Strained Semiconductors*

This proposed effort aims to advance our understanding of artificial quantum emitters by moving beyond defects to investigate the effect of strain on luminescent properties of atomically-thin semiconductors. Professor Nam hopes to demonstrate that the controlled straining of atomically-thin semiconductors will lead to the deterministic single photon emitter centers that can be used in next generation, scalable quantum cryptography.

James O'Dwyer, Associate Professor, Plant Biology, *When Will Complex Systems Thrive, Survive or Collapse?*

Material exchange is widespread in both biological and social systems, from trees trading nutrients via shared underground networks, to ancestral societies exchanging food to mitigate uncertain yields in crop production. Professor O'Dwyer's project will seek commonalities in both the description and consequences of exchange across multiple fields, with a particular focus on the potential for feedbacks arising from exchange to lead to depopulation or collapse.

Nicole Riemer, Professor, Atmospheric Sciences, *Chemistry Across Multiple Phases (CAMP): A Novel Flexible Treatment for Multiphase Chemistry in Atmospheric Models*

Despite decades of study, aerosol impacts still contribute the largest uncertainty in climate projections. To move forward, this project will develop a flexible modeling framework for atmospheric chemistry that integrates physicochemical processes easily, rapidly, and efficiently on state-of-the-art computing platforms.

Rebecca Thornton, Associate Professor, Economics, *Solid Foundations in Early Grade Literacy and Post-Primary School Transitions*

What are the impacts of foundational skills in early grade reading on outcomes in later years? This study extends a longitudinal study that randomized students to receive an intensive, highly-effective literacy intervention in Northern Uganda, to understand the impact of early grade reading on subsequent schooling and life outcomes, as children transition into adolescence.

Dov Weiss, Associate Professor, Religion, *Rabbinic Inferno: Hell and Salvation in Classical Judaism*

There is a widespread assumption today, even among many Jews, that traditional Judaism rejects the existence of fiery torments in the afterlife. Arguing that this attitude misrepresents the history of Judaism, *Rabbinic Inferno* uses hell discourse found in rabbinic literature (70-700 CE, Palestine and Babylonia) to unearth not only the distinctive afterlife theologies of late antique Jewry, but also their deep-rooted anxieties, values, and hopes.

Alexander Yong, Professor, Mathematics, *Algebra, Combinatorics, and Complexity*

Professor Yong will use his CAS appointment to visit in Spring 2021 the Combinatorial Algebraic Geometry semester at the Institute for Computational and Experimental Research in Mathematics (ICERM) at Brown University. This will help him develop his novel mathematical approach to connecting his core area of algebraic combinatorics with complexity theory in computer science.

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 Executive Vice President and Vice President for Academic Affairs

concur.

The President of the University recommends approval.