

Board Meeting  
March 26, 2008

## APPOINT ASSOCIATES TO THE CENTER FOR ADVANCED STUDY, URBANA

**Action:** Approve Appointments of Associates in the Center for Advanced Study for the Academic Year 2008-09

**Funding:** Private Gift Funds from the Beckman Endowment and 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 at Urbana recommends the following list of Associates selected for the 2008-09 academic year, and offers a brief description of their projects:

**Wail S. Hassan, Associate Professor, Comparative and World Literature, *An Arab-American Century: Orientalism and Cultural Translation in Arab-American***

This book provides the first critical survey of Arab-American literature, from its beginnings in the early 20th century till now. This substantial literary tradition consisting of fiction, memoirs, poetry, and drama, has not yet been systematically studied. This is the first to propose a critical reading of the tradition that emphasizes the cultural and ideological forces that have shaped the creative processes of Arab-American writers and the reception of their work in the United States. By examining Orientalism

(Western knowledge, perceptions, and stereotypes of the Middle East), we see how it has influenced Arab-American writers' view of their culture, as well as the ways in which they felt they should address American readers. The research focuses on narrative genres (fiction and autobiography) rather than on poetry or drama. Narrative genres are a particularly fertile ground for investigating the construction of identity in a cultural space traversed by multiple versions of Orientalism as well as the ideologies of race, gender, ethnicity, and nationality. Other related topics to be discussed are: translation theory, postcolonial theory, feminist theory, critical race theory, and theories of minority discourse.

**Lillian Hoddeson, Professor, History, *Analogy as the Motor of Invention: Stanford Ovshinsky's Nerve Cell Model***

This project looks at the broader historical implications of an analogy employed in the mid-1950s by the American inventor Stanford Ovshinsky. By retracing the steps leading to this analogy—between a human nerve cell and an adaptive machine, and from there to Ovshinsky's "threshold" switch and several subsequent inventions, several in widespread use today—new historical perspectives will be added to the study of analogy by cognitive scientists and point to a new interdisciplinary direction in the history of technology.

**K Jimmy Hsia, Professor, Mechanical Science and Engineering, *Cell-CNT Interactions: Cell-mediated CNT Alignment, Aligned CNT-guided Cell Move***

The proposed research project aims at uncovering the underlying mechanisms governing interactions of living cells and carbon nanotubes (CNTs). Drawing from the topographic reactions of cells, it is conceivable that adhering cells may induce alignment of CNTs coated on a matrix. Concurrently, these aligned CNTs may

form a preferred track, polarizing cells and guiding their movement. It is this interaction with potential feedback mechanisms that is of interest to us. Understanding the interactions between living cells and nanomaterials is critically important, not only because it may create new opportunities for nanomaterial applications in bio- and health-related areas, but also because of potential environmental and safety concerns in the applications of nanotechnologies. The interactions between living cells and CNTs provide an ideal case study to achieve this goal.

**Jeffrey Magee, Associate Professor, Music, *Irving Berlin on Broadway***

In a career spanning seven decades, Irving Berlin profoundly shaped the principal sites of American musical entertainment, from Tin Pan Alley to Broadway and Hollywood, yet his work for the musical stage still awaits scholarly analysis. Using the vast archives of Berlin material at the Library of Congress and New York Public Library along with recent studies of musical theater from the perspectives of musicology, cultural history, and dramatic criticism, the book (under contract with Yale University Press) aims to offer the first study of Berlin's entire Broadway career.

**Phillip Allan Newmark, Associate Professor, Cell and Developmental Biology and Genomic Biology, *In vitro Propagation of Stem Cells from Planarians***

The ability of some organisms to regenerate missing body parts has intrigued generations of scientists. The proposed research seeks to define conditions for the *in vitro* propagation of stem cells from the planarian, *Schmidtea mediterranea*, an important model organism for studying the mechanisms of regeneration. The ability to culture planarian stem cells will pave the way for new approaches to study stem cell behavior during tissue homeostasis and regeneration.

**Neal Roese, Professor, Psychology, *Hindsight Bias in Legal Decision-Making***

Computer animation that visually reconstructs traffic accidents is increasingly used as a persuasive tool in courts of law. Depicting events ranging from homicide to traffic accidents, forensic animation is intended to clarify complicated arrays of physical evidence. Might the enhanced clarity of these visually realistic animations contribute to hindsight bias, i.e., the tendency to exaggerate the past predictability of once-future outcomes? Accident reconstruction contains inherent uncertainty that visually impressive computer animation may obscure. In judgments of liability, the onus under American law is to judge only in terms of what the accused knew at the time of the accident, not on the basis of information knowable only in hindsight, and much research has already illuminated the problem of hindsight bias in legal decision-making. This proposal involves laboratory investigations of the effects of forensic animation on hindsight bias with a special emphasis on the theoretical implications of the construct of processing fluency.

**John Ashley Rogers, Professor, Materials Science and Engineering, *Flexible Photovoltaic Modules Based on Ultrathin Monocrystalline Silicon***

The development of a low-cost, renewable source of energy represents one of the most urgent and technically difficult challenges currently facing the world community. The research develops a new type of photovoltaic technology for solar energy conversion. A successful outcome will enable >10x improvements in the cost/watt, in modules with lightweight, mechanically flexible construction.

**Rayadurgam Srikant, Professor, Electrical and Computer Engineering, *Why and how should the Internet be fair?***

The Internet is a resource used by millions of users who have to share the finite resources available in the network. The goal is to consider the various possible notions of fair resource allocation among these competing users and pick a solution that delivers the best quality of service to Internet users.

**Elizabeth A. L. Stine-Morrow, Professor, Educational Psychology, *Aging and Process-Knowledge Interactions in Understanding Text***

The ability to effectively read is important throughout the life span for acquiring new knowledge, for certain experiential and emotional benefits, and for maintaining social ties. This project will examine the adult age differences and the nature of the mental representation created during comprehension by measuring eye movements of younger and older readers as they encounter inconsistencies with what they know or have just read.

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 President of the University concurs.