

UNIVERSITY OF ILLINOIS
AT URBANA - CHAMPAIGN



Position Announcement
IES-Funded Postdoctoral Training Program in Mathematics Education Research

The College of Education at the University of Illinois at Urbana-Champaign seeks a postdoctoral fellow to participate in a new mathematics education research-training program, funded by the Institute of Education Sciences (IES), U.S. Department of Education. The three-year position offers collaborative and independent research opportunities. The program will prepare fellows to address questions relevant to mathematics instruction and policy in a methodologically rigorous manner, and to serve as leaders in improving U.S. mathematics teaching and learning for diverse populations.

Specific research projects will be based upon the joint interests of the fellow and the UIUC faculty mentor(s). Three core faculty members will serve as program mentors: Dr. Sarah Theule Lubienski (mathematics achievement, equity, and reform; expertise in both qualitative and quantitative methods, including multi-level modeling of classroom and large-scale data), Dr. Arthur J. Baroody (non-experimental and experimental studies on the teaching and learning of basic number, counting, and arithmetic, with a particular focus on young children or those with learning difficulties), and Dr. Joseph P. Robinson (effects of policies and practices on the academic outcomes of English learners; expert in quasi-experimental research methods). See below for more information about program faculty, including 16 affiliated faculty members.

We welcome applicants from the disciplines of education, related social sciences (economics, psychology, sociology), mathematics, statistics, or other suitable fields. The ideal applicant will have expertise in mathematics education *or* rigorous research methodologies (e.g., experimental or quasi-experimental design), with the objective of gaining substantial knowledge in the other domain. Desirable attributes also include strong analytic skills, experience with statistical software and large-scale datasets, and an interest in improving education for traditionally underserved students.

The position begins August 16, 2010. Applicants must possess their doctoral degree before that date. All qualified U.S. citizens and permanent residents will be considered. Salary is set by IES at \$50,000 annually plus \$10,500 in benefits. Additionally, each fellow will receive \$7,000 annually for research expenses and \$2,500–\$5,000 annually for conference and other travel.

Interested applicants should submit a letter of interest, curriculum vitae, and up to two writing samples via email to Sarah Lubienski (stl@illinois.edu). Please also arrange to have three letters

of recommendation emailed directly to Dr. Lubienski. Applicant review will begin **February 26 2010**, and will continue until the position is filled. Prospective applicants with questions about the position are encouraged to contact the PIs of the program: Sarah Lubienski (stl@illinois.edu), Art Baroody (baroody@illinois.edu) or Joe Robinson (jpr@illinois.edu).

The College of Education and the University of Illinois at Urbana-Champaign provide strong support for research and opportunities for collaboration with leaders in the field. The College of Education is known for its groundbreaking research, innovative approaches to teaching, and service to the global community. The College is comprised of six departments, including Curriculum and Instruction and Educational Psychology, both ranked in the top 5 nationally according to U.S. News and World Report. The College has 90 faculty actively engaged in research and over 650 undergraduates and 1100 graduate students enrolled annually. More information about the college is available at <http://education.illinois.edu>.

The University of Illinois is an Affirmative Action/Equal Opportunity Employer

Additional Faculty Information

Core Faculty: Three faculty members serve as program directors and primary mentors:

Dr. Sarah Lubienski, Associate Professor, Department of Curriculum and Instruction, focuses on mathematics achievement, instruction, and equity. She has expertise in both quantitative and qualitative methods, with her recent work using multi-level modeling with NAEP and ECLS-K data.

Dr. Arthur Baroody, Professor of Early Childhood Mathematics Education in the Department of Curriculum and Instruction, studies the teaching and learning of basic number, counting, and arithmetic skills and concepts, with a particular focus on young children with learning difficulties.

Dr. Joseph P. Robinson, Assistant Professor of Quantitative and Evaluative Research Methodologies, Department of Educational Psychology, studies the effects of policies and practices on the academic outcomes of English learners; in doing so, he employs cutting-edge rigorous, quasi-experimental research methods, including regression discontinuity and propensity score matching.

Affiliated Faculty: Sixteen University of Illinois faculty members serve as Affiliated Faculty of the program and will welcome fellows' participation in their research projects and courses:

Dr. Carolyn Anderson, Professor in the Departments of Educational Psychology, Psychology, and Statistics. Her research interests include: (1) models for multivariate categorical data, including latent

variable models; (2) applied measurement and psychometrics, (3) social networks and statistics for the educational, social and behavioral sciences.

Dr. Richard Anderson, Professor of Educational Psychology, studies children's intellectual and social development in the context of classroom discussions. He is also the Principal Investigator of a major IES grant entitled “Mindful Instruction of Nonmainstream Children,” which looks at interdisciplinary instruction in classrooms using a quasi-experimental design.

Dr. Hua Hua Chang, Professor in Educational Psychology, focuses on improving large-scale educational assessments. Dr. Chang’s recent work has been concentrated on developing item selection methods for computerized adaptive testing (CAT) including alpha-stratification, global information, and constraint-weighted information.

Dr. Michele Crocket, Department of Curriculum and Instruction, focuses on mathematics education, teacher education and improving achievement at underperforming schools. With funding from the Spencer Foundation, she is currently studying how discourse-based formative assessment practices can improve students’ mathematical understandings.

Dr. Lizanne DeStefano, Fox Family Professor of Education and a Professor in the Department of Educational Psychology, is Director of the University of Illinois STEM Education Initiative (I-STEM), which supports the university’s efforts to improve STEM education. Dr. DeStefano’s research interests focus on evaluations of large scale, multi-site initiatives.

Dr. Jennifer Greene, Professor in Educational Psychology, is an expert in evaluation theory and mixed-method research design. Professor Greene’s research interests focus on the intersections of social science and social policy. She seeks to advance the theory and practice of alternative forms of evaluation, including qualitative, democratic, and mixed methods approaches.

Dr. Gloriana Gonzalez, Department of Curriculum and Instruction, studies high school mathematics teaching and learning. She focuses on innovative ways to teach geometry, including the use of technology and other representations. She also studies ways to attend to students’ prior knowledge when teaching mathematics.

Dr. Rochelle Gutierrez is an Associate Professor of mathematics education in the Department of Curriculum and Instruction and the Department of Latino/Latina Studies. Her research has focused upon understanding the organizational, cultural, and pedagogical aspects of high school mathematics departments that support students of color and students in poverty.

Dr. Sunjin Hong, Department of Psychology, focuses on a variety of cutting-edge statistical issues that are relevant to research in education, including multi-way factor/component analysis, factor analysis of sequential data, image component analysis, resampling and randomization, measurement equivalence, and structural equation modeling.

Dr. Larry Hubert, Lyle Lanier Chaired Professor in the Department of Psychology and the Department of Statistics, has served as President of the Psychometric Society and was awarded the APA Division 5 Teaching Award. He studies data analysis methods in psychology and the behavioral sciences, generally with particular emphasis on representation techniques.

Dr. Barbara Hug is a science education faculty member in the Department of Curriculum and Instruction. Her research focuses on developing and testing curriculum materials that support inquiry

learning in science. She is involved in several multi-institution funded research projects and is the Principal Investigator of an Illinois Mathematics-Science Partnership grant.

Dr. Christy Llera, Department of Human and Community Development, examines the micro-processes involved in educational and labor market stratification, with an emphasis on explaining race and class differences. Her research utilizes HLM, factor analysis, structural equation modeling, logistic regression analysis, as well as Geographical Information Systems (GIS).

Dr. Michelle Perry, Professor in the Department of Educational Psychology, studies children's cognitive development and learning. Dr. Perry's research examines the specific ways in which environmental and instructional features may influence children's mathematics learning and cognitive development.

Dr. Allison Ryan, Associate Professor in Educational Psychology, studies young adolescents' motivation, engagement, and performance in school. Her research falls into three general areas: (1) students' help seeking beliefs and behaviors, (2) the classroom social environment, and (3) peer groups and processes of peer influence in the classroom.

Dr. Katherine Ryan, Associate Professor in Educational Psychology, focus on educational evaluation and high stakes assessment. Her work has examined issues involved in test-based educational accountability. Her current research includes an investigation of the intended and unintended consequences of a state-wide assessment and accountability system.

Dr. Jinming Zhang is an Associate Professor in the Department of Educational Psychology. Until recently, Dr. Zhang served as a Senior Research Scientist at ETS, where he focused on NAEP development. His research interests include multidimensional item response theory, bias correction, test item security, and computerized adaptive testing.