Dr. Erica Walker, Associate Professor, Mathematics Education

We welcome Dr. Walker back from sabbatical. She spent the time working on her current research project exploring the peer and mentoring networks of African American mathematicians.

7-year-old Erica Walker was doing homework at her neighbor’s house when he exclaimed, “You are very talented at math, but you make careless mistakes by writing too quickly!” He happened to be a math teacher, and was already recognizing her talent. In high school, Dr. Walker’s homeroom teacher also happened to be a math teacher. She encouraged Dr. Walker to take AP calculus and eventually to major in mathematics.

“Kids can be arbiters of math knowledge. It doesn’t have to be an adult or a teacher.”

Dr. Walker received her bachelors degree in mathematics from Birmingham Southern College in Alabama and, after graduating from the Master Teacher Fellows Program at Wake Forest University with her masters in mathematics education, immediately started teaching in public schools. She noticed many students arriving early to school with nothing to do, so she created a before-school tutoring program. Here, she examined peer group networks and started asking questions about how they could facilitate success in mathematics. She went on to doctoral study at Harvard, with the intention to become a school superintendent or principal. Somewhere along the way, she realized her true passion was research. In her dissertation, she explored a question puzzling her since high school: “What happens to students who take Algebra I in 8th or 9th grade? Do black and white students continue to take college prep mathematics in high school at the same rates?” To answer this question, she used quantitative methods to analyze longitudinal national data on course taking patterns. In her Post Doc at Teachers College, Dr. Walker took a more qualitative approach to this question. She began working with a local school to examine peer group networks and their impact on high achieving mathematics students’ persistence and performance in math. The results were intriguing. She found that teachers and administrators are largely unaware of the peer networks forming around high achieving students. “They’re doing math in the cafeteria, on the bus, talking about math after school!” Her next study created an after-school peer tutoring program to build on students’ existing networks. Here, students worked with other students and used teachers and TC graduate students as a resource. Dr. Walker found that “some of the kids were really good tutors. By the end they looked like High School math teachers!” The most important lesson for her was that, “Kids can be arbiters of math knowledge. It doesn’t have to be an adult or a teacher. Students can take their time, think, discuss, and come to a solution. That’s a really powerful thing.”

At TC, Dr. Walker teaches several courses, including the Doctoral Research Seminar, Number Theory, Mathematics in the Elementary School and Mathematics and Multicultural Education. “I am a teacher to my core! My main goal when I teach pre-service teachers is to help students think about the applications of what we’re doing in class to their own teaching lives, and to think about research critically.”

One of Dr. Walker’s most memorable experiences was speaking at a math honors ceremony at a local high school. There, she gave a speech so moving that parents approached her afterwards. She said, “I had not considered that something I was saying to high school students could also have a big impact on other people, especially parents.” Her speech encouraged rethinking math. “I think that people have always liked math at some point. When I speak to audiences, I now always try to hook everybody back in— young people, adults. I think that people have a very narrow view of what mathematics is and of their ability to be good at it. If I can expand that view, which I think I am doing in my work, I’m doing my little part in changing that.”

Reflecting on her life, Dr. Walker says “It was probably serendipitous that my homeroom teacher happened to be a math teacher and said, ‘Why wouldn’t you go on to be a math major? You should go on.’ That was a very important moment.”
Remembering Dr. Jhumki Basu, Science Education Alumnus

Jhumki Basu, 31, a 2006 graduate of the doctoral program in Science Education, passed away on December 16, 2008 following a brave struggle with breast cancer.

After graduating from Teachers College, Jhumki joined the NYU Steinhardt Department of Teaching and Learning as an assistant professor of Science Education. Her research focused on youth democratic practice in science education, with a specific focus on urban youth. She said, “I feel strongly that my research should make a difference in the lives of the kids in the community where I live. It's important to me that there be an activist part to what I do.” Angela Kelly, a fellow doctoral student, graduated in 2006 with Jhumki. She remembers her friend and colleague: “Jhumki was an inspiration... a model of brilliance, a strong work ethic, and a selfless devotion to advancing science education for urban children. She will be remembered for her work in critical physics agency, where she pioneered efforts to empower youth through the design and enactment of relevant physics curricula.” Jhumki is survived by her husband Alexander Konstantinou, her mother Radha Basu, and her father Dipak Basu.

Dr. Zacharias Zacharia, Alumnus, Science Education

Zacharias Zacharia is a 2002 graduate of the Doctoral Program in Science Education. He is currently an Assistant Professor at the University of Cyprus.

Dr. Zacharia’s passion for Science Education started in high school; he said “it felt right getting involved with sharing knowledge.” This feeling led him to pursue a bachelor’s degree in Science Education from the University of Cyprus. After completing his B.A., he traveled to the United States to pursue a second bachelor’s degree in Physics at Rutgers New Brunswick. From there, he came to Teachers College, completing both Masters and Doctoral degrees. His dissertation title was The effects of an interactive computer-based simulation prior to performing a laboratory inquiry-based experiment on science teachers’ conceptual understanding of physics. After graduation, Dr. Zacharia remained at TC as an adjunct professor. After a semester, he took a position at Emory University in Atlanta as an assistant professor. In 2003, he received an offer to go back to his home country of Cyprus and teach at his alma mater. Recently, Dr. Zacharia published a gold standard article in the Journal of Research for Science Teaching entitled Effects of experimenting with physical and virtual manipulatives on students’ conceptual understanding of heat and temperature. This article is a product of one of his funded research projects whose primary research question is: “When is it valuable to use manipulatives, both physical and virtual in science instruction? And when is the use of physical manipulatives in science experimentation preferable to virtual manipulatives and vice versa?” He follows this question with many more: “Should we combine them? Sequence them? Blend them?” and if yes, “What is the criteria for their use?” In addition he is working on two other research projects. The first is a grant supported by the Cyprus Research Foundation whose goal is to “look at discourse and describe what learning and teaching through modeling looks like, in an effort to inform teachers as to what to expect from their students, and what they should seek to promote or prompt.” The second research project is a six million Euro (approximately $7,553,000 U.S. dollars) initiative funded by the European Union called “Science Created by You” or SCY. The purpose of this project is to “create a system for constructive and productive learning in science and technology.” To do this, the team (a consortium of 12 research groups) started developing the “SCY Lab,” a place for students to individually and collaboratively work on missions which use multiple learning tools including games, experiments, and new technology. The missions are constructed around controversial questions like: “Can we grow lettuce on the planet mars?”

In addition to research, Dr. Zacharia teaches all levels of coursework at The University of Cyprus. Despite the work load, he enjoys interacting with students at all levels (undergraduate and graduate). He goes on, “I have learned a lot from them that helped me improve my teaching and view of education; education is about sharing.” With research, teaching, administration and community work, Dr. Zacharia is a busy man. His biggest challenge is “how to manage and be on top of things.” When he does get a chance to breathe, he enjoys going to the beautiful beaches of Cyprus during the five month long beach season. He also treasures time spent with his wife and two young sons.

Dr. Zacharias Zacharia would like to thank MST Department Chair O. Roger Anderson for his continued guidance and support.
**Recent Accomplishments**

**Dr. Chris Emdin**, Science Education, was invited to present at the annual PBS Celebration of Teaching and Learning Fair. The Fair will be held March 6 & 7. For more information, visit: thirteencelebration.org

**Dr. Chris Emdin**, Science Education, was selected to speak at the 2009 Visiting Minority Scholar lecture series by the University of Wisconsin-Madison. His presentation topic was, *Urban Science Education from Sputnik to Hip-Hop: Addressing Problems and Creating Possibilities*.

**Dr. Chris Emdin**, Science Education, was invited to present at the TC Winter Roundtable on Cultural Psychology and Education. The Winter Roundtable is the longest running continuing professional education program in the United States devoted solely to cultural issues in psychology and education.

**Dr. Chris Emdin**, Science Education, received the NARST Equity and Diversity Scholarship. The NARST Equity and Ethics Committee awards scholarships to support early career science educators from under-represented groups within the U.S.

**Dr. Chris Emdin**, Science Education, presented at a panel assembled by the Black Student Organization at Columbia University.

**Dr. Chris Emdin**, Science Education, was invited to sit on a panel the Colin Powell Center for Public Policy at City College. The topics of discussion included NCLB and education policy.

**Gus Andrews**, CCTE Doctoral student, hosts media literacy program on AfterEd TV, the online video channel supported by the TC library. The media show lives where discussion and remixing happens: YouTube. Check it out at [http://www.youtube.com/user/themediashow](http://www.youtube.com/user/themediashow)

**Dr. Jamsheed Akrami-Ghorveh**, CCTE, is the creator of a feature-length documentary titled Friendly Persuasion. It explores Iranian cinema after the revolution. The film premiered on “City Cinematheque” of CUNY TV. In addition, Jamsheed was interviewed for film analysis after a screening of Daughters of the Sun. Dr. Akrami-Ghorveh was promoted to Adjunct Professor.

**Kenny Nienhusser**, Director of Academic Administration and a doctoral student in the Higher and Postsecondary Education Program, was selected as a TC Office of Policy and Research (OPR) Fellow for the 2009-2010 academic year. The title of his dissertation research is “Implementation of In-state Tuition for Undocumented Immigrants in New York State.”

**Dr. Lalitha Vasudevan**, CCTE, was invited to judge the Ninth Annual Media that Matters Film Festival taking place on Wednesday, February 11, 2009. For more information, [www.mediatthatmattersfest.org](http://www.mediatthatmattersfest.org)

**Sean Telles**, CCTE student, is an education consultant for the MTV program *My Super Sweet 16 Presents: Exiled*. With the help of the United Nations, the program sends self-proclaimed spoiled teenagers to learn about indigenous cultures.

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**Dr. Lin and Dr. Lopez Ortiz, CCTE Alumni, Editors of AEQJ**

CCTE Alumni, Dr. Lin Lin and Dr. Brenda I. López Ortiz (Ed.D., 2006) were appointed feature editors of the Spring 2010 issue of the Academic Exchange Quarterly Journal (Volume 14, Issue 1). They are delighted to invite paper submissions from MST program faculty, staff, students and alumni. See the call for papers. “We are interested in publishing two types of articles on educational technology: 1) Articles describing how educators are using various new media and technologies; 2) Articles that consider the theoretical, ethical, and budgetary impact of educational technology in all of its emerging forms. Preference will be given to newer forms such as GIS, blogs and wikis, but all innovative uses of technology will be considered. Please, consider submitting your manuscript.”

To find out more information about this issue: [http://www.rapidintellect.com/AEQweb/5tech.htm](http://www.rapidintellect.com/AEQweb/5tech.htm)
CCTE Conference: Technology, Media & Designs for Learning

The Communication, Computing and Technology program is hosting the Teachers College Educational Technology Conference 2009: Technology, Media & Designs for Learning. This conference will serve as a multi-disciplinary forum for graduate students to discuss and exchange information on the research, development and applications of new technology in K-12 classrooms, distance learning settings, higher education, and corporate learning environments. The conference will take place on May 10-11, 2009 on campus.

Presentations and papers will cover the following topics: Instructional Design of Online Environments, Social Software, Web 2.0 Tools, Human-Computer Interaction, Computer-Mediated Communication, Mobile Media, Computer-Supported Collaborative Learning, Games for Learning, Possibilities of Virtual Worlds, New Literacies, Identify Formation, the Future of Libraries and Museums, Cross-Cultural Communication, Media in the Developing World, Teaching with Technology, including teaching Science, Math, Computer Science, & Computer Science Education.

Dr. Susan Lowes, Adjunct Professor, CCTE

Dr. Susan Lowes is an Adjunct Professor in the CCTE Program and Associate Director of the Institute for Learning Technologies.

Dr. Lowes received her doctorate in Anthropology with distinction from Columbia University in 1994. Her dissertation fieldwork focused on class formation in the West Indies. After she received her Ph.D., Dr. Lowes joined the staff of the Institute for Learning Technologies, working on a series of projects, including the Eiffel Project, a five-year federal grant to integrate technology into New York City public schools. After the grant ended, she began to work on evaluation projects, and now her focus is primarily in that area. The transition to evaluation was easy for Dr. Lowes, being an anthropologist. It seemed natural. “I enjoy evaluation because I can work on many different projects at the same time. It’s always interesting, always moving, and there is always a new challenge with new questions to be addressed.” She believes that “if the project you’re working on appreciates evaluation and knows the benefits of evaluation, it is very rewarding.” She also serves on several advisory committees for the U.S. Department of Education Office of Educational Technology.

Her own research currently focuses on online teaching and learning. One project examined the affordances and constraints of K-12 online learning environments. Her research explored what teachers learn from teaching online, and how that knowledge impacts face-to-face classroom teaching. She believes “the affordances and constraints of teaching online allow you think about teaching in new ways.” In addition to this research area, Dr. Lowes has also published on using freehand mapping to understand children’s conceptions of the world and using robotics to teach middle school and high school science.

She teaches two classes as TC. The first is a research methods class which focuses on research design while “expanding students’ methodological toolkit to include such things as drawings, concept maps, and network analysis.” The second class is Online Schools and Schooling, which examines “what is going on in the rapidly expanding world of K-12 online learning.” Students also look at the challenges of online classroom research, specifically learning how to cope with not “seeing” inside the classroom. In addition, she advises CCTE Masters Degree (M.A.) students. She loves it because she “learns so much from the projects that students do.”

In her free time, Dr. Lowes plays tennis and travels. She owns a small place in the West Indies, where her husband is from. There, she works on a community digital library which includes taped interviews, videos and photographs. In addition, she operates a website which collects vignettes of stories of growing up on the island. “What I like about my life is that it’s never the same. Every day is different, with new challenges.”

“The affordances and constraints of teaching online allow you to think about teaching in new ways.”

To submit a paper, visit:
http://events.tc.columbia.edu/tcetc2009/submit/

For other information, visit:
http://events.tc.columbia.edu/tcetc2009/
Lou Lahana is a doctoral student in the CCTE program and currently teaches technology at P.S./M.S. 188 on the Lower East Side. Lou began his academic career at UC Santa Cruz, where he graduated with a bachelor's degree in Psychology. From there, he began Teach for America's rigorous application process. He was selected and sent to staff a school library in the South Bronx. “I didn’t know what to make of it. It was just this room full of books. I didn’t even know the Dewey decimal system.” He worked long nights, and after three years the library looked better than ever. While working in the Bronx, he received a job offer from P.S./M.S. 188 – The Island School to teach Pre-K to 6th grade. He accepted the offer with the promise of a new library, but when he arrived, there was no library to be found. Instead, Lou was in the computer lab teaching PowerPoint and simple games. Eventually, he got the library he was promised, and it was beautiful. Though excited to be back in the books, he started “getting the technology bug.” He was still teaching technology classes, but instead of games and PowerPoint, he decided “I'm going to teach kids Photoshop!” The following year, he decided to teach Flash. “I liked it, but I felt like the real world connection wasn’t there. No cross curricular connections.” At this point, Lou was working in the library while teaching technology classes. In 2004, the Island School added a Middle School. That same year, the school received funding for an internet café. Unfortunately, there was nobody to run it. The principal officially asked Lou to leave the library and teach technology full time. The rest is history! His focus on blogs became clear while examining and creating curriculum. “That’s the time when I fell in love with blogging. It transformed my teaching and my relationship with students; It has become the platform for my life’s work.” In class, Lou asks each student to create their own blog to respond to topics presented. He calls them “blog topics for talented teens.” The topics are often based on social issues, and this year, the students covered blood diamonds, child labor, and the meat and dairy industries. Cross curricular connections abound! According to his students, Lou “makes work fun!” and shows them how to use in-class learning at home. To guide his class, Lou runs his own blog, techbrarian.com, which continues to receive rave reviews. It’s inspired by his students. “I love everything about media, technology and empowering kids.” In the future, Lou hopes to teach teachers about educational technology, write curriculum and eventually a book. His doctoral program in Instructional Technology and Media will surely get him there. In his spare time, Lou loves audio books, cyberpunk novels, performing in his band and spending time with his wife and baby, which is on the way. His advice to teachers is to always “keep open to the joys of teaching.”

Asunka, S. A., & Chae, H. S. Strategies for teaching online courses within the Sub-Saharan African context: An instructor’s recommendations.


Hammer, J. & Black, J. Games as virtual experience: Implications for teaching and design.

Han, I., Black, J. B., & Hallman Jr., G. Are simulation and physical manipulation different in improving conceptual learning and mechanical reasoning?


Kinzer, C. K., Hoffman, D., Lohnes, S., & Turkay, S. Phases of the integrated curriculum project: Development of the anchored instruction curriculum and project research design.

Kinzer, C. K., & Turkay, S. College students’ expectations and use of a virtual environment: Examining teaching and possibilities of an emerging technology in a college course.

Li, D., Black, J. B., Han, I., Kang, S, & Chan, M. Technology-based learning tools (programming and hand-held device) for improving the understanding of science concepts in a lego robotics elementary after-school classroom.

Meier, E., Moore, F. M., Brydges, S., Sheppard, K., & Miksic, E. Engaging concentric circles of learning: Urban middle school science teachers and a consortium of science experts.

Moore Mensah, F. Elementary Preservice Teachers’ Microteaching in an Urban Classroom: A Case for Culturally Relevant Teaching and Lessons Learned.


Saravanos, A., Paek S., & Kuwata, J. The costs and benefits of corrected-errors in instruction.

Stern, R. Social-emotional learning (SEL) assessments and interventions.

Vasudevan, L. Text production across adolescents’ litscapes.

Vasudevan, L. Court-involved youth making a new way: Teaching and learning and the spaces in-between.

Vasudevan, L. Researching multimodality as lived, performed, and embodied.

Vikaros, L. S., Vitale, J., Black, J. B., & Tishutina, N. I. Tangible concepts: Concept mapping software that affords and assesses mental models.

Wang, Y., & Lin, X. A study on learners’ perception of multiple-perspective learning and their perspective preference.
Recent Publications and Presentations


**Fisher, C. C. E.** (2009, March). *Little hands, foul moods, and runny noses 2.0: The research you should know when making games for kids.* Game Developers Conference (GDC), San Francisco, CA.


Dr. Robin Stern to teach course:

Human Emotions and Digital Technology

Dr. Robin Stern is an Adjunct Professor in the CCTE Program and author of the popular book, *The Gaslight Effect.*

Dr. Stern will teach MSTU 5510: *Human Emotions* and Digital Technology in Fall 2009. The course will meet Wednesdays from 7:20-9:00pm. The co-teacher for the course will be Andres Richner, graduate of the CCTE program and Director of Technology at the Calhoun School.

Students enrolled in the course will be encouraged to ask, “What do we know about our emotions and others? What are underlying emotional themes that come up when we interface with technologies? What technologies are best suited to developing emotional skills and competencies? And, importantly, how is our emotional learning (and that of our children) being shaped by growing up with technologies?” Students will learn the psychology of emotions, emotional intelligence and “how emotions interact with popular technologies: e-mail, Facebook, Twitter, Emoticons, Websites, Vital, Second Life, Games and more.” Students will be responsible for designing and developing projects to be tested at local private schools. For example, “students interested in junior high school children and bullying might design a learn and play environment and try it out in an actual class of junior high students.” It is a great opportunity to begin work on personal research questions.

Along with teaching, Dr. Stern is a licensed psychoanalyst and therapist in private practice. She published a book called *The Gaslight Effect, How to spot and survive the hidden manipulation others use to control your life.* The purpose of the book is to help people, particularly women, “recognize and name an all too common kind of psychological manipulation, the kind where someone tries to define your reality for you. Over time, you let them. Over time, you begin to second guess yourself and feel less and less like the person you used to be. Once the dynamic of the Gaslight Tango (no one can do it alone!) can be named and understood, it then can be recognized and healed.”

*Dr. Stern’s book can be purchased on amazon.com*

CCTE Hosts Global Game Jam

On Friday, January 30th, 2009, 11 teams of wide-eyed game designers convened at Teachers College for the first annual Global Game Jam. TC was one of 54 sites worldwide to hold the 48-hour competition. The object was to produce an original game in 48 hours which incorporated the adjectives illusionary, pointed, and persistent. In addition, the game had to fit the theme “As long as we have each other, we’ll never run out of problems.” Jessica Hammer, event organizer and CCTE Instructor, believes that Game Jams are important because “they provide focused opportunities for innovation. It’s sometimes hard to try experimental game designs when there’s a lot riding on your project - whether that’s because it’s going to be commercially released or because your dissertation depends on it! But in a short-form, highly constrained environment, designers can really let their imaginations fly. Plus the cross-pollination that happens when you put a bunch of smart game designers in a room together is amazing!” At the end of the day, a game called Ghandi Ghandi Boom Boom took home the win, and won a trip to the Game Developers Conference in San Francisco. You can download the game for free: [http://globalgamejam.org/games/ghandi-ghandi-boom-boom-0](http://globalgamejam.org/games/ghandi-ghandi-boom-boom-0)

Article Adapted from TC News at www.tc.edu