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Mathematics Department
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Employment

Pacific Lutheran University, 2008-present.
Assistant Professor

University of Arizona, 2007-2008.
Adjunct instructor

University of Arizona, 2004-2007.
Teaching post-doctoral fellow in the Mathematics Department
Post-doctoral Fellow at the Center for the Mathematics Education of Latinos/as (CEMELA)

Education

PhD in Pure and Applied Logic, Carnegie Mellon University, 2004.
Dissertation Title: Aspects of ergodic theory in subsystems of second-order arithmetic
Advisor: Jeremy Avigad

MS in Mathematics, Carnegie Mellon University, 2000.

BS in Theoretical Mathematics with Applications, University of Belgrade, 1997.

Research interests

Primary: Mathematics education. Equity in K-12 mathematics education, culturally responsive pedagogy, teacher education, inquiry-based learning in university mathematics classes, out-of-school learning environments.

Secondary: Mathematical logic. Proof theory, intuitionist and constructive analysis.

TEACHING

Teaching experience

Assistant professor, Pacific Lutheran University, 2008-present.

Adjunct instructor, University of Arizona, 2007-2008.

Teaching post-doctoral fellow, University of Arizona, 2004-2007.

Summer course instructor, Carnegie Mellon University, 1999-2002 (6 semesters).

Recitation instructor, Carnegie Mellon University, 1998-2004 (12 semesters).

Recitation instructor at the University of Belgrade, 1997-1998 (2 semesters).

Courses taught

Pacific Lutheran University

MATH 107 (1 semester)
MATH 123, Modern Elementary Math I (9 semesters).
MATH 124, Modern Elementary Math II (1 semester).
MATH 151, Introduction to Calculus (3 semesters).
MATH 152, Calculus II (2 semesters).
MATH 245, Discrete Structures (2 semesters).
MATH 446, Math in the Secondary School (3 semesters).

University of Arizona and Carnegie Mellon University

Mathematics in Modern Society, Business Mathematics (A), Calculus Preparation, Calculus I and II, Introduction to Linear Algebra, Matrix Algebra, Discrete Mathematics, Understanding Elementary Mathematics (A and B), Mathematical Logic, Geometry and Measurement for K-8 Teachers.

Teaching-related activities

Giaudrone Middle School, Fall 2011. Duties: observe mathematics classes and work with individual students; supervise MATH/EDUC 446 students who were placed in mathematics classrooms.

Independent Study, Spring 2011. Conducted an independent study with student Lucas Dolge. The student studied in-depth topics from the mathematics endorsement competencies document for Washington State, such as complex numbers, basics of linear algebra, etc.

Small Group Instructional Diagnosis (SGID), 2010-present. Position: Consultant. Duties: offering faculty feedback about their courses, based on a consultation with students in the course.

Lincoln High School, September 2010-present. Duties: observing 9th grade algebra classes and helping individual students; tutoring after school.

Independent Study, Spring 2010. Conducted an independent study "Math games: research and practice" with student Lynsey Uyeno. The student compiled calculus games for use in the classroom, and organized a Calculus game night in the mathematics department.

Mathlete Coaching Project, 2009-present. Position: Program Co-director. Duties: recruiting and training PLU undergraduates to coach local elementary and middle school students for the Washington State Math Olympiad; creating curriculum for coaches; providing instructional support to coaches; organizing coach-teacher meetings; organizing annual family math night for students and their families; organizing a visit for 100 5th and 6th grade students to PLU; organizing a community night at Thompson Elementary School.

Keithley Middle School, Fall 2008. Position: Tutor. Duties: observing classes, helping teacher with the lesson, and occasionally teaching lessons.

CEMELA, University of Arizona, 2005-2007. Position: Fellow. Duties: coordinating, curriculum planning, facilitating, supervising undergraduate facilitators and conducting research in an after-school Math Club for Latino/a students, grades 3-6; preparing students for math competitions; planning the curriculum and teaching geometry and topics courses for in-service middle-school teachers.

Undergraduate Research Program, University of Arizona, 2005-2007. Position: Advisor. Duties: helping undergraduate students choose, research, and write final reports or papers on topics in mathematical logic

(one paper published in an undergraduate mathematics journal); presenting in the undergraduate research seminar.

Teaching Assistant Training, University of Arizona, 2005-2007. Position: Co-instructor. Duties: co-teaching a class for first-time teaching assistants; helping with first-time teaching assistant training in the summer; giving feedback to graduate students on their teaching; supervising graduate teaching assistants.

Summer Institute for Native American Students, University of Arizona, summers of 2005, 2006. Duties: co-teaching of a mathematics/mathematical biology summer camp for Tohono O'odham and Yaqui high school students; tutoring and providing other academic aid.

Sonia Kovalevski High School Mathematics Day, University of Arizona, 2006 and 2007. Position: Co-organizer. Duties: co-recipient of a grant to organize a day of mathematics workshops for female high school students to encourage them to pursue careers in mathematics and the sciences; co-organizing the workshops; running workshops in logic and graph theory.

High School Visitation Project, University of Arizona, December 2006. Duties: preparing and running a graph theory workshop for local high school students.

Supplemental Instruction (SI), Carnegie Mellon University, 1999-2004. Position: Supervisor. Duties: interviewing, training, observing and coordinating undergraduate SI leaders.

Eberly Center for Teaching Excellence, 2000-2004. Position: Teaching Fellow. Duties: observing and giving feedback to graduate student instructors; helping run workshops and orientations.

Tutoring, 1993-2004. During college and graduate studies, tutored between 100-200 students at all levels: from second-grade mathematics to MBA statistics classes.

SCHOLARLY ACTIVITY

Journal articles

Thirumudthy, V., Simic-Muller, K. Kolam: A mathematical treasure of South India. (submitted)

Turner, E., Varley Gutierrez, M., Simic-Muller, K., & Díez-Palomar, J. (2009). "Everything is math in the whole world": integrating critical and community knowledge in authentic mathematical investigations with elementary Latina/o students. *Mathematical Thinking and Learning*, 11(3), 136-157.

Simic-Muller, K., Varley Gutierrez, M., & Turner, E. (2009). Math club problem posing. *Teaching Children Mathematics*, 16(4), 206-212.

Turner, E., Varley, M., Simic-Muller, K., & Díez-Palomar, J. (2007). "Math is everywhere": connecting mathematics to students' lives. *Journal of Mathematics and Culture*, 1(2).

Díez-Palomar, J., Simic-Muller, K., & Varley, M. (2007). El Club de Matemáticas. Una experiencia cultural de matemáticas de la vida cotidiana, para la diversidad. *Uno : Revista de Didáctica de las Matemáticas*, XIII(45).

Simic, K. (2007). The pointwise ergodic theorem in subsystems of second-order arithmetic. *Journal of Symbolic Logic*, 72, 46-66.

Avigad, J., & Simic, K. (2006). Fundamental notions of analysis in subsystems of second-order arithmetic. *Annals of Pure and Applied Logic*, 139, 138-184.

Book chapters

Felton, M., Simic-Muller, K., Menéndez, J. ‘Math isn’t just numbers or algorithms’: Mathematics for Social Justice in Preservice K-8 Content Courses. (submitted)

Simic-Muller, K., Varley-Gutierrez, M., & Gutierrez, R. *Stand and Deliver twenty years later*. In E. Sklar, & J. Sklar (Eds.), *Mathematics and popular culture*. Jefferson, NC: McFarland. (in press)

Vomvoridi-Ivanovic, E., Varley, M., Viego, G., Simic-Muller, K., & Khisty, L. K. *Teacher development in after-school mathematics contexts: insights from projects that capitalize on Latinas/os’ linguistic and cultural resources*. In P. Bell, B. Bevan, A. Razfar, and R. Stevens, (Eds.). *Learning-Out-of-School-Time (L.O.S.T.)*. New York, NY: Springer. (in press)

Conference proceedings

Diéz-Palomar, J., Varley, M., Simic, K. (2006). *Children and adults talking and doing mathematics: A study of an after-school math club* (vol. Vol. 2, pp. 450-456). Merida: S. Alatorre, J.L. Cortina, M. Saiz, & A. Mindez (Eds.), Proceedings of the Twenty Eighth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education.

Other publications

Fitting Circles, published as a contributed activity for Geometry Playground, by D. Heath and J. Jacobs, The MAA Mathematical Sciences Digital Library Loci: Resources, September 2010. Although the resource is published under the names D. Heath and J. Jacobs, all parts of the resource, including contributed activities by other authors, were refereed.

Simic, K., (2010). *Pseudopoezija*. Belgrade, Serbia: AZIN. (A poetry book in the Serbian language).

Simic, K. (1997) *Olistavanje*. Novi Sad, Serbia: Matica Srpska. (A book of short stories in the Serbian language).

Presentations and guest lectures

Simic-Muller, K., Felton, M., Menéndez, “Challenges and Successes in Teaching Mathematics as Sociopolitical in Preservice K-8 Content Courses,” Association of Mathematics Teacher Educators (AMTE) annual meeting, February 2012.

Simic-Muller, K., Menéndez, J., “A social justice-oriented approach to mathematics for preservice K-8 teachers,” Creating Balance in an Unjust World annual conference, January 2012.

Simic-Muller, K. “Teaching mathematics for social justice in content courses for preservice K-8 teachers,” 4th Annual Northwest Conference on Teaching for Social Justice, October 2011.

Simic-Muller, K. “The promise of infinitesimals in your calculus class and elsewhere,” University of Puget Sound Mathematics and Computer Science Department Seminar, March 2011 (invited talk).

Simic-Muller, K., “Whose mathematics is it anyway?,” EDUC 205 class, March 2011.

Simic-Muller, K., “Whose mathematics is it anyway?,” PLU Mathematics Department seminar, March 2011.

Simic-Muller, K., Dorner, B. C., Dorner, C., Van Gundy, A., Gartner, N., Mathematical Association of America (MAA) Pacific Northwest Division Meeting, "Math Outreach" (panel discussion), Seattle, WA, May 2010.

Simic-Muller, K., Turner, E., Varley, M., Diez-Palomar, J., Sutton, T., CEMELA/CPTM/TODOS Conference, "Community-based problem solving in the after-school math club," (poster session) Tucson, AZ, March 2010.

Simic-Muller, K. "Gödel's Incompleteness theorems, or This statement is false!," PLU Mathematics Department Seminar, Spring 2009.

Diez-Palomar, J., Simic-Muller, K., Turner, E., Varley, M. "Changing pre-service teachers' perceptions of mathematics education with Latinos/as through after-school experiences." Paper presented as part of a symposium entitled "The After-school: Shifting paradigms for Latinos/as learning mathematics," American Educational Research Association (AERA) annual meeting, Chicago, April 2007.

Diez-Palomar, J., Simic-Muller, K., Turner, E., Varley, M. "Teaching mathematics for social justice with elementary Latino/a students in an after-school setting." Paper presented as part of a symposium entitled "Teaching Mathematics for Social Justice," AERA annual meeting, Chicago, April 2007.

Diez-Palomar, J., Simic-Muller, K., Turner, E., Varley, M. "Teaching mathematics for social justice with elementary school students," NCTM annual meeting research pre-session, Atlanta, March 2007.

Kondek, L., Simic, K. "Designing an After-School Math Club for Bilingual Students," NCTM annual meeting, St. Louis, April 2006.

Simic, K., "Defining products of L_p functions in subsystems of second-order arithmetic," Association for Symbolic Logic (ASL) annual meeting, Atlanta, January 2005 (invited talk).

Research in Progress

"Teaching Mathematics for Social Justice in Math Content Courses for Preservice Teachers." Collecting and analyzing student work related to social-justice related mathematics curriculum in classes for preservice K-8 teachers, and examining their beliefs about teaching for social justice. Co-PI of the study.

SERVICE

Department Service

Academic advisor, 2008 - present. Advising 7-10 mathematics and mathematics education majors.

First-year advisor, 2009-2010. Advised four first-year students.

Capstone advisor. Advised five capstones in 2009-2010, three in 2010-2011, and three in 2011-2012.

Study session facilitator, November 2010. Prepared students for the West-E exam.

MAA liaison, September 2010 - present.

Calculus night organizer, April 2010. Co-organized an evening of calculus games with student Lynsey Uyeno.

Department meeting note-taker, spring 2010 - present.

Developed a website for mathematics education majors, available at

<http://www.plu.edu/~simicmka/mathedmajorresource.html>.

The website is frequently updated and contains various information relevant to future teachers.

Liaison with the School of Education, 2008 - present.

Department curriculum committee member, 2008 - present.

Department search committee member, 2008-2009.

Helped rewrite the course descriptions for MATH 123 and MATH/EDUC 406 for the course catalog, spring 2009.

University Service

Campus Life Committee member, Fall 2011-present.

University Diversity Committee representative of the Campus Life Committee, Fall 2011-present.

Student Media Board representative of the Campus Life Committee, Fall 2011-present.

Disability Support Services Advisory Committee member, 2011-2012, by Ruth Tweeten's invitation.

MESA Day Math Competition lead judge, April 2011.

Tunnel of oppression facilitator, February 2011.

Facilitator and panelist, Explore Retreat, January 2011, January 2012.

Consultant, SGID, September 2010 - present.

Member of the Ethnic studies working group consisting of faculty and staff, formed with the purpose of creating an Ethnic Studies minor at PLU, 2009 - 2011.

Mathlete Coaching Project Co-coordinator, September 2009 - present.

Panelist, *Love your body day*, October 2008.

Women and gender studies committee member, 2008-2009.

Collaborated with the Department of Instructional Development and Leadership to help write the EPC proposal and plan for MATH 124, a course that will be added to the department's course offerings in 2011-2012, spring 2009.

Professional Service

Association of Mathematics Teacher Educators (AMTE) 2012 Annual conference organizing committee member.

AMTE Conference proposal reviewer, 2009 - present.

CEMELA 2011 retreat organizing committee member.

Panel facilitator, CEMELA/CPTM/TODOS conference, March 2010.

Journal article reviewer, Mathematics for All (TODOS), 2009 - present.

Mentor, Association of Women in Mathematics (AWM), September 2005 - present.

Drexel University's Ask Dr. Math website Dr. Math volunteer, sporadically 2006-2010.

CEMELA research symposium organizer, January 2007.

Selected Professional Development Activities

Green dot faculty workshop, April 2011.

Wild Hope faculty seminar participant, 2010-2011.

“Math in the City” mathematical modeling workshop participant, December 2010.

Member of the PLU delegation to the University of Namibia, March 2010. The three-member delegation met with representatives of the University of Namibia and from Hedmark University College in Norway to extend the tripartite agreement among the universities and to discuss future collaboration.

Participated in the CEMELA Retreat (May 2005), CEMELA School (January 2006), CEMELA Research symposium (January 2007).

Participated in education and mathematics education classes (2004-2006).

Funded projects

The Mathlete Coaching Project, with Bryan Dorner, Celine Dorner, and Daniel Heath. Received \$3000 in funding by the Greater Tacoma Community Foundation in December 2010.

The Mathlete Coaching Project, with Bryan Dorner, Celine Dorner, and Daniel Heath. Funded \$15,000 annually by Intel. September 2009 - Present.

Sonia Kovalevski High School Mathematics Day. Funded by the Association of Women in Mathematics (AWM) and the National Security Agency (NSA) in 2006, 2007, 2009. In 2009, the event was canceled due to lack of interest.

Awards and Honors

Carnegie Mellon Department of Mathematical Sciences 2003 summer fellowship.

Mellon College of Science 2003 Hugh D. Young graduate student teaching award (presented annually to a graduate student in the Mellon College of Science).

Best graduating student in 1997, College of Mathematics, University of Belgrade.

Professional memberships

National Council of Teachers of Mathematics (NCTM).

Association of Mathematics Teacher Educators (AMTE).

Mathematical Association of America (MAA).

American Mathematical Society (AMS).

TODOS: Mathematics for All.