

DEPARTMENT OF MATHEMATICS NEWSLETTER

PROFESSOR PAUL DUCHATEAU PLANS RETIREMENT



Professor DuChateau

Dr. Paul DuChateau will officially retire from the Dept. of Mathematics in May 2009 after 37 years of dedicated service. Dr. DuChateau joined the department in the fall of 1973 as an Associate Professor, after spending three years at the University of Kentucky.

Dr. DuChateau received his MS from the University of Michigan (1963) and his PhD from Purdue University (1970). During his career, Dr. DuChateau published over 50 papers in partial differential equations, inverse and ill-posed problems. He was also the co-author of a well known textbook published in 1989 entitled "Applied Partial

Differential Equations," as well as the 1986 Schaum's Outline series text "Partial Differential Equations."

Dr. DuChateau taught a wide range of undergraduate and graduate courses and as Paul puts it "while the students have no doubt forgotten all the mathematics, they still remember the magic tricks." He also served as the course coordinator for M161 from 1986-1988, and as graduate director from 1995-1997. He mentored 19 MS candidates and three PhD graduates.

Dr. DuChateau participated on a number of departmental committees including the curriculum committee, executive committee, graduate and undergraduate committees as well as the internal review committee

and the University's Continuing Education and BRSG committees.

Dr. DuChateau and his wife Sara Jane are looking forward to their retirement years, as they continue to enjoy their second home in Clamecy, France located in Burgundy not far from Chablis. Although Paul will continue with his mathematics interests, he says he'll be busy working on all those home improvement chores he has put off over the years. The DuChateau's children include Charles, currently associate conductor and cellist in South Pacific in NYC, Christian, a senior producer for CNN International located in Atlanta, GA and Danielle, a college student, who resides in Fort Collins.

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SPECIAL RECOGNITION

BIRTH ANNOUNCEMENT

Congratulations to Oleg Emanouilov and his wife on the birth of their twin sons, Alexander and Max, born January 9th, 2009.

ENGAGEMENT ANNOUNCEMENT

Congratulations to grad student Lori Zieglemeier on her recent engagement to Mike Neuberg. Lori worked two years in the front office as an undergraduate student. The big day is being planned for July 25, in Fort Collins.

RICK MIRANDA NAMED INTERIM PROVOST



Dean Miranda

On January 1st, Dean Rick Miranda took over the duties of Interim Provost at CSU. A PhD graduate of MIT, Miranda joined the Department of Mathematics in 1982 and was appointed chair of the department in 1997. In 2002, he became Dean of the College of Natural Sciences. As Provost, Dr. Miranda will oversee academic programs and faculty affairs while providing the academic vision and leadership to fulfill the land-grant mission at Colorado State.

JAN NERGER NAMED INTERIM DEAN FOR THE COLLEGE OF NATURAL SCIENCES



Dean Nerger

Jan Nerger, a longtime professor and administrator at CSU, has been named to the position of Interim Dean for the College of Natural Sciences. For the past six years, Dr. Nerger has served as Associate Dean for Undergraduate Studies in the College of Natural Sciences. Dr. Nerger has been at Colorado State University for 19 years, beginning as an Assistant Professor in the Department of Psychology. In 2002, Dr. Nerger became Associate Dean, where

she was responsible for the undergraduate curriculum, reviews of the departmental budgets and management of enrollment growth funds. She has been active in the college strategic planning and implementation efforts and is co-founder of the Women in Natural Sciences faculty group.

In 1988, Dr. Nerger received her PhD in Experimental Psychology from U.C. San Diego. Her research is aimed at identifying the neural mechanisms underlying human color perception. Currently, CNS has more than 3,200 undergraduate and 600 graduate students.

2009 ARNE MAGNUS LECTURE SERIES



Prof. Roland Glowinski
University of Houston

The 2009 Magnus Lecture Series is being planned for the last week of April. This year's guest speaker is Professor Rowland Glowinski of the University of Houston. Watch for details of his talk on the departmental weekly news sight found at:

www.math.colostate.edu/news.shtml

This lecture series is given annually in honor of Dr. Arne Magnus, our friend and colleague for 25 years. These lectures would not be possible without the support from alumni and friends of the Mathematics Department.

WNTC CONFERENCE HELD AT COLORADO STATE UNIVERSITY DECEMBER 2008



Dr. Jeff Achter

Colorado State hosted the 42nd Western Number Theory Conference December 15-18, 2008. Jeff Achter organized the conference, which was funded by the National Security Agency and the Number Theory Foundation.

The conference started over forty years ago as a holiday gathering of Dick and Emma Lehmers' students at Berkeley, and has evolved into an annual, internationally known Number Theory meeting. WNTC08 had 46 par-

ticipants from as far away as Sydney, Australia and as close as our own graduate program, representing over two dozen institutions. The conference has a tradition of supporting young mathematicians, and this year was especially successful; over half the talks were contributed by graduate students and recent PhD graduates.

Speakers from CSU Department of Mathematics included Jeff Achter, Arsen, Elkin, Shawn Farnell, Beth Malmskog, and Rachel Pries.

For more information on WNTC, go to: <http://www.wntc.org>

2008 PhD MATHEMATICS GRADUATES AT COLORADO STATE UNIVERSITY

Fall 2008 PhD Graduates (graduate, advisor, thesis title, current employment)

Chris Frederick	Chris Peterson	Persistence Homology of Sequences of Neighborhood Complexes for Graphs	Instructor Sierra College
Soley Jondsdottir	Alexander Hulpke	Automorphism Towers of General Linear Groups	Federal Government
Josh Ladd	Patrick Burns	Burns Large-Scale Computational Analysis of National Animal Identification System Mock Data, Including Traceback and Trace Forward	Associate R&D scientist, Oak Ridge National Laboratory

Summer 2008 PhD Graduates

Arta Jamshidi	Michael Kirby	Modeling Spatio-Temporal Systems with Skew Radial Basis Functions: Theory, Algorithms and Applications	Postdoctoral Fellow Imperial College, England
Sheldon Lee	Don Estep & Simon Tavener	An Adaptive Algorithm for an Elliptic Optimization Problem, and Stochastic-Deterministic Coupling: A Mathematical Framework	Assistant Professor Viterbo University

Spring 2008 PhD Graduates

Jen-Mei Chang	Michael Kirby	Classification on the Grassmannians: Theory and Applications	Assistant Professor California State U, Long Beach
Keith Mertens	Vakhtang Putkardze	Mathematical Methods for Fluid-Solid Interfaces: Meandering Streams and Sand Ripples	Postdoctoral Fellow University of North Carolina
Yue Qiao	Michael Kirby	Radial Basis Functions (RBFs) For Solving Color Conversion Problems	IBM

SIAM CONFERENCE SCHEDULED IN DENVER



Dr. Donald Estep
Organizer

The 2009 SIAM Annual Meeting will be held at the Sheraton Denver Downtown Hotel July 6-10, 2009. SIAM's Annual Meeting provides a broad view of the state of the art in applied mathematics, computational science,

and their applications through invited presentations, prize lectures, minisymposia, and contributed papers and posters. This premier conference in applied mathematics is being held jointly with the SIAM Conference on Control and Its Applications (CT09).

Dr. Donald Estep is on the current SIAM organizing committee.

Pre-registration and hotel reservation deadline is June 8, 2009.

For additional information go to:
<http://www.siam.org/meetings/an09/>

2008 CONFERENCE ON WOMEN IN NUMBERS

CSU Professor Rachel Pries and graduate student Elisabeth Malmskog attended the Conference on Women In Numbers held at the Banff International Research Station. Dr. Pries was a key organizer for the 2008 conference held November 2-7. The main goal of the conference was to increase the representation and visibility of women in number theory, while enhancing gender diversity. This was accomplished by introducing female graduate students to potential advisers, collaborators, and thesis problems, and as a more long-term objective, by increasing the participation of women in research activities in number theory and related application. Organizers will continue working towards their goals by publishing a top-quality conference proceedings volume and organizing future follow-up conferences.

DR. PAUL KENNEDY'S FALL SABBATICAL VISITS



Dr. Paul Kennedy

One of the principal goals of the sabbatical plan was to investigate ways to improve and expand on the department's online offerings. Visits to the mathematics departments at Oregon State

and Virginia Tech provided insight into, not only how to improve our online pre-calculus platform, but also how to incorporate small group problem solving in an online environment. At Montana State, I worked with Maurice Burke on integrating dynamic geometry software into both live and online Modern Geometry courses. We submitted a proposal to write a chapter in a book on improving instruction with dynamic geometry software, which has subsequently been approved and will be published this year. While in Montana I also investigated their mathematics education graduate programs as models for what we might do here in the future. I also gave invited talks for the mathematics department at the University of Montana and at NCTM conferences in Reno and Palm Springs. Additionally, I was offered a contract from Stech-Vaughan Publishers to write a new text, "Transitions: Preparing for College Mathematics;" it will be published Summer 2009.

DR. TAVENER'S FALL 2008 SABBATICAL



I feel very fortunate to have been able to spend 5 months visiting the group in Computational Biology at the Oxford University Computing Laboratory. Some idea of

the range of their activities can be found at their [website](#). I have visited before so I should not have been surprised, but I was struck by the scale of the enterprise, the sheer numbers of faculty, research fellows and graduate students and the extent to which mathematics and mathematicians have penetrated the biology and physiology departments and vice versa. The degree of interaction between biologists, mathematicians and engineers seemed exceptional, although I am sure in reality it is the result of years if not decades of slow development. [Doctoral Training Centers](#) form a big part of

interactions and they are quite radically changing the way large numbers of students are trained. The major purpose of my visit was to interact with faculty and postdocs supported through the new center [OCCAM](#) to develop numerical techniques to accurately and efficiently compute the coupling between nonlinearly elastic deformations of heart muscle and the multi-scale reaction-diffusion systems modeling cardiac electrophysiology. Most work to date has considered these two processes in isolation, but one has to only watch "Scrubs" a few times to realize they are really coupled. This is an ongoing project and I am looking forward to visits from my collaborators in the next few months and to returning to England myself again soon.



April is Mathematics Awareness Month

The AMS, ASA, MAA, and SIAM announce that the theme for Mathematics Awareness Month is MATHEMATICS AND CLIMATE. Calculus, differential equations, numerical analysis, probability, and statistics are just some of the areas of mathematics used to understand the oceans, atmosphere, and polar ice caps, and the complex interactions among these vast systems. Discover how math and science are used to address questions of climate change. Go to <http://www.mathaware.org>