Dr. Patrick Ingram joined the Department of Mathematics this fall semester as a tenure track Assistant Professor. Dr. Ingram received his PhD in Mathematics from the University of British Columbia in 2006. His Supervisor was Prof. M. A. Bennett. From 2006-2008, Dr. Ingram was a NSERC Postdoctoral Fellow at the University of Toronto. In 2008, he became a Brookfield Research Professor at the University of Waterloo for three years. Dr. Ingram’s research interests are in number theory and Diophantine geometry, with applications to holomorphic dynamics.

Dr. Ingram’s wife, Elissa Ross, is a recent PhD graduate in Discrete Geometry and a postdoctoral fellow at the Fields Institute in Toronto. Stop by Dr. Ingram’s office in WB 217 and welcome both him and his wife to our community and campus.

Dr. James Wilson joined our Department of Mathematics as a tenure track Assistant Professor. Dr. Wilson received his PhD in Mathematics from the University of Oregon at Eugene in 2008. Prior to receiving his degree, Dr. Wilson spent three and a half years working at the Intel Architecture Labs developing speech recognition software and designing new consumer electronic devices. After earning his PhD under the mentorship of William M. Kantor, Dr. Wilson was a Zassenhaus Assistant Professor at The Ohio State University and a consultant for the Center for Communications Research in La Jolla, CA.

Dr. Wilson’s research interests are in groups, algebras and computations. He studies finite groups and develops algorithms to find the structure of very large groups, which involves various tools, often outside of the group theory.

Dr. Wilson’s family includes his wife Karie, and a 6-month old son Ezra. Stop by his office in WB 125 to welcome him and his family to campus and the Fort Collins community.
ALGEBRA COMBINATORICS CONFERENCE
IN MEMORY OF ROBERT A. LIEBLER
NOVEMBER 4-6, 2011

The Department of Mathematics at Colorado State University is pleased to host a conference in honor of the memory of our colleague Robert Liebler. The conference will take place November 4-6, 2011. Speakers include: John F. Dillon, National Security Agency; Chris Godsill, University of Waterloo; Jonathen Jedwab, Simon Fraser University; Qing Xiang, University of Delaware. Bill Kantor is also a confirmed attendee. A limited number of contributed talks will also be given. There will be an opportunity to share reminiscences of Robert at the conference dinner on the evening of November 4, 2011.

The organizing committee consists of: Anton Betten, Colorado State; Bill Cherowitzo, University of Colorado @ Denver; Sylvia Hobart, University of WY, Tim Penttila, Colorado State; and Ken Smith, Sam Houston State University.

For more information, with additional materials posted in the near future, go to: http://www.math.colostate.edu/~hulpke/Bob or email the committee at: bob2011@math.colostate.edu

DEPARTMENT HOSTS THE 2011 Fall WAGS Conference
Western Algebraic Geometry Symposium
OCTOBER 1–2, 2011

The Western Algebraic Geometry Symposium traces its origins back to the Utah - UCLA Algebraic Geometry Seminar started in 1989 by H. Clemens, D. Gieseker, M. Green, J. Kollár, and R. Lazarsfeld. Later on, it became the Utah - UCLA - Chicago Algebraic Geometry Seminar. In 2002, WAGS was resurrected. The goal was to have a twice-yearly meeting of algebraic geometers in the western half of the United States and Canada, with ample time for chatting, as well as a good number of research talks. The conference has been consistently attracting over 50 participants ever since.

The 2011 fall conference will be hosted by the Department of Mathematics at Colorado State on Saturday, October 1st and Sunday, October 2nd. The speakers include: Alastair Craw, University of Glasgow; Milena Hering, University of Connecticut; Giorgio Ottaviani, Università di Firenze; Kevin Tucker, Princeton University; Jonathan Wise, Stanford University; and Melanie Matchett Wood, University of Wisconsin at Madison.

For more information, go to: http://fall11.wagsymposium.org/ or contact local organizers Jeff Achter, Dan Bates, Renzo Cavalieri, Eric Miles, Sebastian Casalaina-Martin, or Dusty Ross.
# DEPARTMENT GRANT AWARDS

## JUNE 11– AUGUST 11, 2011

<table>
<thead>
<tr>
<th>PRIMARY-PI</th>
<th>CO-PI</th>
<th>SPONSOR</th>
<th>TITLE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edwin K P Chong</td>
<td>Louis L Scharf, Ali Pezeshki, Jie Luo</td>
<td>John Hopkins University</td>
<td>Mathematical Infrastructure for Knowledge Enhanced Compressive Measurement</td>
<td>$280,000</td>
</tr>
<tr>
<td>Mark A. Brown</td>
<td>Simon J. Tavener, Mary R. Ontiveros, Peter K. Dorhout, Andrew C. Warnock, Margaret R. Cech</td>
<td>NSF—National Science Foundation</td>
<td>Rocky Mountain Scholars Program Participants Portion</td>
<td>$60,000</td>
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<td>Mark A. Brown</td>
<td>Simon J. Tavener, Mary R. Ontiveros, Peter K. Dorhout, Andrew C. Warnock, Margaret R. Cech</td>
<td>NSF—National Science Foundation</td>
<td>Rocky Mountain Scholars Program</td>
<td>$19,695</td>
</tr>
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<td>Jeffrey D. Achter</td>
<td>None</td>
<td>Simons Foundation</td>
<td>Collaboration Grant: Asymptotics and Arithmetic of Moduli Spaces of Abelian Varieties</td>
<td>$7,000</td>
</tr>
<tr>
<td>Jennifer L. Mueller</td>
<td>None</td>
<td>HHS-NIH-Biomedical Imaging and Bioengineer</td>
<td>Exploratory Innovations in Electrical Impedance Tomography</td>
<td>$348,060</td>
</tr>
<tr>
<td>Renzo Cavalieri</td>
<td>None</td>
<td>Simons Foundation</td>
<td>Simons Collaboration Grant</td>
<td>$7,000</td>
</tr>
<tr>
<td>Donald J. Estep</td>
<td>Simon J. Tavener</td>
<td>Idaho National Laboratory</td>
<td>Uncertainty Analysis for Multiscale Models of Nuclear Fuel Performance</td>
<td>$97,480</td>
</tr>
<tr>
<td>F. Jay Breidt</td>
<td>Mark J van der Woerd, Donald J. Estep, Karolin Luger, Jennifer L. Mueller, Michelle Mills Strout, James M. Bieman</td>
<td>HHS-NIH-National Institute of General Medical Science</td>
<td>The Inverse Problem for Estimation of Structure of Biological Macromolecules from Small-Angle X-Ray Scattering Data</td>
<td>$265,260</td>
</tr>
</tbody>
</table>
The members of the EIT lab have been studying circuits and their components. A recent project in the lab was to build pulse oximeters, which measure blood-oxygen levels using an infrared sensor applied to the subject's finger. PhD student Michelle Melleenthin of the School of Biomedical Engineering has been leading the circuit labs. While the mathematics of circuit analysis is not deep, it is important to understand the hardware components of the electrical impedance tomography (EIT) system that measures the data for the reconstruction algorithm. EIT is a technology with applications in medical imaging, industrial processing, and geophysics in which the electrical properties of a medium are recovered from current-to-voltage data (mathematically a Dirichlet-to-Neumann map) and mapped to form an image. This fall, the lab is focusing on current source design.
MATHEMATICS DEPARTMENT WELCOMES NEW GRADUATE CLASS

Brent Davis - BS
California Polytechnic State University

Tegan Emerson - BS
Oregon State University

Bahaudin Hashmi - BS
Lahore Uni of Management & Science

Timothy Hodges - BS
Colorado State University

Josh Maglione - BS
California State University, Fullerton

Rachel Meier - BS
Colorado State University

Rashmi Murthy - MS
Christ University

Douglas Ortego - BS
University of Louisiana, Lafayette

Farrah Sadre-Marandi - MS
Uni of Tennessee, Chattanooga

DEPARTMENT OF MATHEMATICS NEWSLETTER
Kathleen Holm graduated from Colorado State University in 2003 with a BS in Mathematics. Her undergraduate adviser and mentor was Dr. Jennifer Mueller. Kathleen continued her education at the University of Arizona where she earned her MS in Applied Mathematics. After four years as a graduate student at North Carolina State University, Kathleen graduated this summer earning a PhD in Biomathematics with a minor in Statistics. Her PhD advisor was H.T. Banks from the Mathematics Department. While in graduate school, Kathleen was supported by a fellowship through the Center for Quantitative Science in BioMedicine (CQSB).

Kathleen recently accepted a postdoctoral position at the EPA’s National Exposure Research Lab in Research Triangle Park, NC. She will be working in the Human Exposure and Atmospheric Sciences Division with the Exposure and Dose Research Branch. She is excited to be working with an interdisciplinary team doing research using both applied mathematics and statistics.

Congratulations, Kathleen, from the faculty and staff at Colorado State! Thanks for sharing your update.

If you are an alumni of the Department of Mathematics at CSU and would like to be featured in our newsletter, please submit a brief update and photo to: franklin@math.colostate.edu. Submissions will be considered for future publication.

THE CAMPAIGN FOR Colorado State University

Support Colorado State today...

GIVE A GIFT
Help CSU today for a better tomorrow.

Colorado State University students and faculty embody a spirit of service and a passion for innovation. Our alumni and friends exemplify the value of relationships and tradition. As the state’s land-grant University, we honor our history and responsibility to provide access to excellent public higher education. The Campaign for Colorado State University represents a vote of confidence in everything we do, everything our University stands for. This $500 million campaign increases financial support for students and faculty. It strengthens learning and research experiences. It improves and expands facilities for our growing campus community. The campaign challenges all those who believe in CSU and its mission to help secure its future.

~Your gifts allow us to open doors, change lives, and transform our world.~