



MAXIMA: News and Highlights from the Department of Mathematical Sciences

The University of Texas at El Paso <http://www.math.utep.edu> <http://facebook.com/utep.math> FALL 2016

From the Chair (Dr. Christina Mariani)

Dear alumni and friends, We can't wait to see you this month at our 2016 Homecoming, which features both in-person and virtual ways to interact! (see page 2)

I am delighted to welcome Assistant Professor Dr. Xianyi Zeng, whose expertise in Numerical partial differential equations, Computational mechanics, and Financial/Actuarial Mathematics will support the Computational Science program, which is hosted and directed in the Math Department, and our graduate and undergraduate programs, as well as new Lecturers Lorena Galván, Víctor Jiménez-Nava, Samantha Johnson, and Desmond Koomson.

Especially exciting is our growth in research: During the last five years we had nearly 350 peer-reviewed publications and \$27 million in grants, compared to 150 and only \$1.5 million in 2005-10. Our faculty have received prestigious awards in scholarship, grantsmanship, and teaching, including four ROTA awards and one Piper. Also, we continue to be ranked top ten for Mathematics and Statistics degrees conferred to Hispanic students both at the undergraduate and master's levels by the magazine *Diverse: Issues in Higher Education*.

But we won't stop there. Our vision is to take the Department to a new level and make it recognized for excellence in research and teaching. We have ambitious but attainable goals, including: improving technology and facilities and developing new programs in Big Data, Financial and Actuarial Math, Data Analytics.

I believe we all share these goals and thank the Alumni, Faculty and Friends for their support. This year, we initiated a Fundraising Campaign to raise \$50,000 by December 31, 2016, and we are well on our way, **thanks to the very generous gifts of Alumni and Faculty**. Participating in high-impact educational practices engages students' intellectual curiosity and satisfies their thirst for discovery. Your gifts provide students with academic learning experiences by supporting: student registration fees and travel expenses to workshops and conferences, emergency tuition assistance and scholarships, new research equipment and cutting-edge technology.

If you wish to help your Math Department during this campaign, please go to <https://givingto.utep.edu/math> or use the form on page 4. You can support your choice of existing funds, or you can easily establish your own by contacting Erika Villegas, Director of Development and Donor Database Systems, 915.747.7283. Finally, I thank our Dean Dr. Kirken for continually supporting our Department. His leadership is helping the College and the Department achieve further excellence in research and teaching. I hope to see you, physically or virtually, at our homecoming in October!

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HUNTLEY FUND GIFTED \$500K

Lawrence "Larry" Huntley became an Assistant Professor in the Math Department in 1964 after serving in the military. He was a dedicated and popular instructor who inspired generations of students before retiring in 1990. After Mr. Huntley passed away in 2005, his wife Katsuko "Kitty" Huntley honored him by establishing the Lawrence "Larry" Huntley and Katsuko "Kitty" Huntley Endowed scholarship to provide annual scholarships to our undergraduate majors. Kitty Huntley passed away in September, 2015, and her will gave the endowed scholarship a gift of \$500,000.

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DR. LESSER A PIPER PROFESSOR!



Dr. Larry Lesser and UTEP president Dr. Diana Natalicio.

Dr. Larry Lesser was announced this May as a 2016 Piper Professor. The Minnie Stevens Piper Foundation established this prestigious statewide award in 1958 to "seek out the well-rounded, outgoing teacher, devoted to the profession, who has made special impact on his students and the community."

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OLYMPIAN ALUMNA! by Dr. Larry Lesser

Gerina (Mendoza) Piller (B.S., Mathematics, 2007) continues to have major golf success. Being ranked 15th in the Rolex World Standings qualified her for the 2016 Olympics where she began its final round tied for second place, just two shots behind the eventual gold medalist!

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Gerina (Mendoza) Piller

ALUMNI LUNCH CONNECTS!



The Department enjoyed a wonderful feast on October 27 at its annual homecoming week lunch in Bell Hall. It was a terrific chance to talk and network with friends and colleagues. Attendees spanned many decades, including alumn Gabriel Garibay who graduated (Texas Western College) in 1952 and regaled us with stories from the days when semester tuition was \$25. This year's lunch debuted the use of global.gotomeeting.com to allow virtual connection with alumni unable to attend in person.

ACTUARIAL ACTION!



UTEP's Actuarial Science Association held its inaugural meeting on September 28, 2016 to discuss future events. Led by its president (actuarial concentration student Mengling Hu) and advisor (Dr. Amy Wagler) from our department, the club plans workshops on professional skills, study groups for actuarial exams, meetings on obtaining internships, and activities for networking and socializing. The club's activities will give students concentrating in actuarial sciences a more complete professional preparation for careers that apply mathematical and statistical modeling to insurance and financial industries.

UTEP was approved by the Society of Actuaries (SOA) to be on the list of UCAP (Universities and Colleges with Actuarial Programs) schools for Exams P and FM. This is good timing for the Department's long-standing concentration in Actuarial Sciences (within the mathematics degree) because demand for actuary scientists is projected to increase in the near future regionally and nationally. Actuary scientists use mathematical models to price insurance policies and annuities, and more information about this exciting career is at <https://soa.org/member/>. To apply for a position as an associate actuary scientist, students must have taken at least the first two (Probability; Financial Mathematics) in the series of SOA exams. The Department's Actuarial Sciences concentration has historically prepared students well to pass the exams. For more information, contact Dr. Amy Wagler (awagler2@utep.edu) and visit <http://www.math.utep.edu/undergraduate/actuarial/>.

PIPER PROFESSOR LESSER *from page 1*

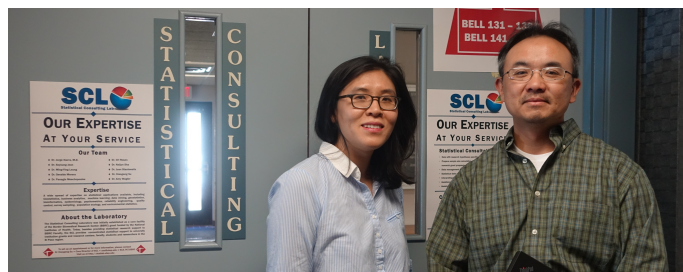
Each May the Foundation selects only 10 winners out of all (150+) two-year and four-year public and private colleges and universities in Texas. Lesser's Piper Professor designation came with a gold pin, \$5000 award, and a certificate presented at Fall Convocation (see photo on page 1). Two of the 14 Piper Professors in UTEP's history are from the Mathematical Sciences Department (Dr. Lesser and 2003's Dr. Nancy Marcus) and no UTEP department has more. Lesser received media coverage and congratulatory letters from the UT System Chancellor, the Texas governor, and state and national legislators.

IN MEMORIAM

Associate Professor Emeritus **Dr. Carl Hall** passed away January 20, 2016. Dr. Hall joined the department in 1969 and retired 31 years later. His time at UTEP included serving as Chair and Associate Chair of the Department as well as President of the UTEP Faculty Senate. He was also a very popular instructor and authored the Brooks/Cole text *College Algebra and Trigonometry*. Dr. Art Duval noted, "He was very helpful to me when I got involved with both reform calculus and started teaching courses for pre-service teachers. He and Mike Gray were the entire pre-service elementary teacher program here, when it consisted of a single course."

STAT LAB LAUNCHES 24th YEAR

The Statistical Consulting Laboratory (SCL) held a pizza party to kick off its 24th year of providing statistical and computing support to university institution grants and research centers, faculty, students and researchers in the El Paso region. The statistical consulting team has great collective expertise with its ten members and recently-acquired statistician Dr. Soyoung Jeon, who received her PhD in statistics from UNC in 2012 and had three years' post-doc experience at Lawrence Berkeley National Laboratory. Attended by over 50 people, the pizza party featured presentations about the department, SCL, and 2016 consulting projects, by Drs. Mariani, (SCL director) Su, and Jeon, respectively. Please visit our new, mobile-friendly website: at www.statlab.utep.edu.



SCL staff statistician Dr. Soyoung Jeon, and SCL Director Dr. Xiaogang Su

HUNTLEY FUND GIFTED \$500K

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There was an equal scholarship gift in her will given to Emporia State University in Emporia, Kansas where Lawrence Huntley had received his Bachelor's and Master's Degrees. Lawrence first met Katsuko when he was in the U.S. Army in Japan. He served, was discharged, and went back to college in Kansas. He missed Kitty greatly and so enlisted in the U.S. Navy with the condition that he would be sent to a naval base close to Sasebo, Japan. They complied; he returned to Japan, married Katsuko, served and was discharged. In the early 1950s the immigration quotas from Japan were filled, but a congressman Larry knew from his Kansas district sponsored a bill that gave Katsuko Nakahara Huntley her entry into the U.S. in 1952.

During her last years, Kitty received help from Dr. James E. Nymann and his wife Carol, the executor of Mrs. Huntley's will. Carol had power-of-attorney for Kitty and took care of her personal, medical and financial affairs from 2005 until her death in 2015. Carol received her M.Ed. in Educational Psychology in 1972 from UTEP and spent 20 years as a cherished teacher with the EPISD. Dr. Nymann, now an Emeritus Professor in our department, was a beloved instructor who served the Department from 1967-2002 in many capacities, including Department Chair.



Mrs. Katsuko "Kitty" and Mr. Lawrence "Larry" Huntley



Mrs. Carol and Dr. James Nymann

FACULTY LEAD CONFERENCES

Department faculty have been extremely active in organizing recent and upcoming conferences in mathematics or mathematics education. Dr. Larry Lesser chaired the 13th International Sun Conference on Teaching and Learning March 17-18, 2016 which was attended by 250 people and covered by KTEP-FM, KDBC-TV, and KFOX-TV. The conference theme of "teaching and learning experientially" complemented UTEP's newly-launched Quality Enhancement Plan (utep.edu/engage).



Dr. Christina Mariani and colleagues in New Jersey

Dr. Christina Mariani co-organized the 6th "High Frequency data in Finance and other fields" conference in 2015 at Stevens Institute of Technology. Attended by about 150 people each year since 2009, this conference is the first one dedicated to the modeling and trading of High Frequency Data and

Analytics, and has been sponsored and endorsed by the International Mathematical Union, American Statistical Association, National Sciences Foundation, the Institute of Mathematical Statistics, the Financial Systems Center at Stevens Institute of Technology, The International Association of Financial Engineers and the CME Group Foundation. The organizers received a congratulatory letter from New Jersey representatives in the US Congress.

CLUB ZERO NEWS

Club Zero members continue to present workshops to students, on mathematics topics and programming languages. The goal is to help students in their academic life, and to inspire them to use what they learn and potentially begin their own undergraduate research experience.

For the UTEP community service event Project MOVE, Club Zero volunteered at the Insights El Paso Science Center, helping them clear and clean storage rooms for their displays. (Note for our non-local alumni: the museum was relocated in 2013 from its downtown location to the old Alamo Elementary School building.) Club Zero also helped Insights by using a fun and interactive kid-friendly version of the Monty Hall problem with children and parents to raise funds and STEM awareness in the community.

The Club also holds a monthly game night (in collaboration with Meeple Board Game Society) open to anyone. The game night serves not only as an enjoyable evening of the networking and fun, but also inspires many attendees to join the club and participate in its other activities.

DEPARTMENTAL HONOREES FOR ACADEMIC EXCELLENCE

Fall 2015: **Edmundo Antonio Silva** (undergraduate), and **Mario Guzman** (M.A.T. graduate student).

Spring 2016: **Ashley Wilson** (M.A.T. graduate student), and **Ng Tun Lee** (statistics graduate student).

Alumni Data Update Form - *Keep in touch!*

Online form at www.math.utep.edu/alumni

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Name while at UTEP, if different: _____

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City: _____ State: _____ Zip: _____

Phone Home: _____ Email Address: _____

Degree(s) and Major: _____ Year(s): _____

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Let us know what you have been up to (to be included in the department newsletter or website):

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Tracey Gorham Blanco (B.S., Mathematics, 2006) graduated with a Ph.D. in Mathematics Education from the University of Wyoming in May, 2016. She is working at Colorado State University in Pueblo, Colorado, where she has taught several classes for the math department, and coordinates the Math Learning Center.

Jiazheng (Steven) He (M.S., Statistics, 1995) has been working in the health care/clinical trial industry since graduating UTEP, doing statistical programming in supporting clinical trials for oncology, diabetes, immunology, and ophthalmology.

OLYMPIAN ALUMNA! *from page 1*

Finishing 11th in the field of 60, she will always have the rare distinction of being an Olympian as well as the special distinction of being a graduate of our gold-medal department! As Piller told *MAXIMA*, "I'm proud to be a Miner in the Olympics. I never would have thought growing up that I would have been an Olympian because I never played a sport that was in the Olympics. So to have represented Team USA in the Olympics was a dream come true, especially for golf being back in the Olympics after 112 years. I consider representing the USA one of the highest honors anyone can have."

During her UTEP senior year, Piller was the 2007 Conference USA individual champion (the first player in UTEP women's golf history to win a conference title), Player of the Year, and won four tournaments. Subsequently, she has had 30 top 10 (including four second-place) finishes on the LPGA Tour. Piller notes, "I feel like having a Math degree has really helped me understand golf a little better. There is a lot of basic math used when just playing the game, but at my level can get pretty complex with the slopes and all of the variables golf has."

CPS PROGRAM KEEPS GROWING

The interdisciplinary Computational Science (CPS) program currently has 41 faculty mentors from the College of Science and College of Engineering and is directed by our department's Dr. Ming-Ying Leung. Within the past two years, the department has recruited two assistant professors to join the CPS program: Dr. Natasha Sharma (in the research area of numerical methods for differential equations) and Dr. Xianyi Zeng (computational mechanics and scientific computing). We now are searching for a computational scientist with expertise in statistical modeling for big data and high-performance data analytics. The CPS program offers diverse research projects with themes ranging from computational partial differential equations and finite element methods to statistical computing and optimization, computational electromagnetics, geoscience and aerospace models, and cancer informatics. Most projects are sponsored by federal agencies, such as DOE, NASA, NIH, NSF, and USDA, with funding support for students to participate in research. Since its launch in fall 2008, the CPS program has produced 25 Ph.D. graduates.

TWO CERTIFICATES OFFERED

The Department is excited to offer graduate certificates in two areas: applied statistics and applied and computational mathematics. Full descriptions and program director contact information are at <http://math.utep.edu/graduate/>. The Graduate Certificate in Applied Statistics is the region's only certificate program of its kind and is widely applicable to students of varying backgrounds, including: business, industry, local medical school professionals, secondary school teachers, and recent graduates of undergraduate or graduate programs who want statistical training to improve their job prospects. The Graduate Certificate in Applied and Computational Mathematics will provide students from diverse backgrounds well-rounded training in core mathematical and computational skills useful for careers in research, teaching, or industrial work in which advanced mathematics or large-scale computation is used in an essential way. The successful students will acquire strong competences in mathematical modeling and analysis, numerical algorithms development, and computational programming.

INFLECTION POINTS

(See www.math.utep.edu for other accomplishments too numerous to list!)

Dr. Kien Lim received the 2015-16 Giraffe Award from the Center for Excellence in Teaching and Learning.

Mrs. María Salayandía was promoted to Administrative Services Coordinator.

Dr. Joan Staniswalis retired and became a Professor Emerita.

Dr. Amy Wagler named as an Associate Chair of the Mathematical Sciences Department and a 2016-17 Faculty Fellow for the Center for Civic Engagement. She won the 2016 College of Science Mathematics Student Choice award based on votes from Fall 2015/Spring 2016 graduating mathematics majors.

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