

Mathworks 2013 Annual Report

THINK BOLDLY



DEVELOPING BOLD THINKERS AND CREATIVE PROBLEM-SOLVERS

YOUR SUPPORT HELPED US TO:

- ENGAGE MORE THAN 350 STUDENTS IN DEVELOPING THEIR MATH ABILITIES DURING OUR 2013 SUMMER MATH PROGRAMS
- FIELD A TEAM IN THE ANNUAL PRIMARY MATH WORLD CONTEST AND BE CROWNED WORLD CHAMPIONS
- DO ORIGINAL MATH AND SCIENCE RESEARCH, ENGAGING FACULTY, GRADUATE STUDENTS, UNDERGRADUATES, AND YOUNGER STUDENTS
- ACHIEVE TEXAS EDUCATION AGENCY STATE ADOPTION FOR THE *MATH EXPLORATIONS* TEXTBOOKS, GIVING MIDDLE SCHOOL STUDENTS ACROSS TEXAS OPPORTUNITIES TO BUILD A SOLID MATHEMATICAL FOUNDATION
- REACH \$2M OF OUR \$6M MATHWORKS LEGACY CAMPAIGN GOAL, PROVIDING ONGOING SUPPORT TO STUDENTS OF ALL SOCIOECONOMIC BACKGROUNDS TO PURSUE MATHEMATICAL LEARNING OPPORTUNITIES



FROM THE DIRECTOR

Dear Friends of Mathworks:

What an incredible year it has been for Mathworks! It's hard to believe that 2014 will mark our 25th anniversary. Starting with a small Honors Summer Math Camp (HSMC) program in 1990, Mathworks has grown to be a vibrant and active research and development environment impacting undergraduates and graduate students at Texas State, as well as middle and high school students throughout the state and country. As this year comes to a close, let me highlight some of our achievements:

- Our middle school math curriculum, *Math Explorations*, achieved state adoption through the Texas Education Agency (TEA). This six month long review process involved the work of our core curriculum team, as well as critical support from the Meadows Foundation, Sid W. Richardson Foundation, and KDK-Harman Foundation. *Math Explorations* was the only adopted math curriculum published by a university.
- Seven Texas State faculty mentored students on original math and science research during our 2013 HSMC program. Five teams that conducted research during the HSMC were recognized in the nation-wide Siemens Competition in Math, Science, & Technology, including two that advanced to the regional finalist level. The primary supporter for our research program was Silicon Labs, which is helping Mathworks establish one of the premier research programs for high school students in the country.
- We had more than 300 students participate in our Mathworks Math Contest (MMC) given in October to middle school students throughout the state. The top students were invited to participate in our residential Junior Summer Math Camp (JSMC) that included 40 students from Texas as well as an international connection with new friends from Indonesia. In addition, our local JSMC had over 200 students, with programs in both San Marcos and Round Rock.
- A team of 4 JSMC students formed the San Marcos team that competed in the Primary Math World Contest in Hong Kong, finishing first in the world!

We wanted to thank you for helping us reach \$2 million of our \$6 million endowment goal. Earnings from the Mathworks endowment are already funding scholarships for our annual summer math programs. These scholarships provide tremendous opportunities to students of all backgrounds as they develop a solid mathematical foundation. Thanks to ongoing match challenges pledged by the KLE and Kodosky Foundations, we continue to establish partnerships for our Mathworks Legacy campaign. An exciting new development is a "25 for 25" endowment match challenge pledged by five HSMC alumni, a \$25,000 goal in celebration of the 25th anniversary of Mathworks.

I hope you will share this report with family and friends. Thank you so much for your help and support which is enabling Mathworks to help all students develop into creative problem solvers who will be our leaders in the future. It has been a wonderful year and we look forward to even more successes in the future.

Best wishes for a happy, healthy holidays and new year.



Max Warshauer
Director, Mathworks
Regents Professor of Mathematics

Mathworks 2013 Annual Report

THINK BOLDLY

MISSION

Mathworks is a center for innovation in mathematics education at Texas State University. Our mission is to research and develop model programs and self-sustaining learning communities that engage K-12 students from all backgrounds in doing mathematics at a high level.

STAFF

Max Warshauer, Director
Terry McCabe, Associate Director
Andrew Hsiau, Assistant Director
Patricia Amende, Accountant

ADVISORY BOARD

Herb Carter
Howard Falkenberg
Jeff Kodosky
Bob Rutishauser
Jim Smith

GENERATING RESEARCH AND BUILDING CONNECTIONS

Engaging faculty and students in scholarly research and establishing relations across the world

Mathworks is a vibrant and active center of scholarly research and model programs, connecting faculty and students to collaborate and create new frontiers in math and science knowledge. Our interconnected pillars of summer math programs, teacher professional development, and curriculum development provide a rich environment for conducting original research activities.

Our research and outreach activities this past school year included:

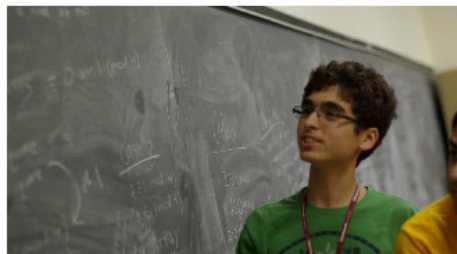
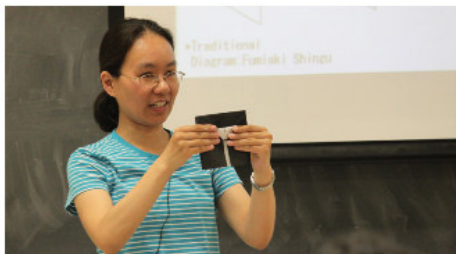
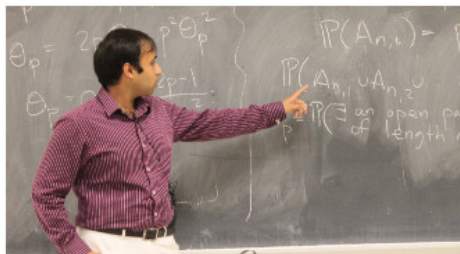
Generating Research

- During the 2013 Honors Summer Math Camp (HSMC) program, we engaged 7 Texas State faculty in advising math, science, and engineering research. The faculty members worked with high school students to generate scholarly research in graph theory, biochemistry, computer science, and nano-engineering. A team of scientists from 3M also mentored one of the research papers. The results of these research projects have been submitted to academic journals and await review and potential publication.
- Five research papers authored during the 2013 HSMC were recognized in the prestigious Siemens Competition in Math, Science, & Technology, including two that achieved regional finalist standing. Texas State has now produced 137 semi-finalists or above in the Siemens Competition in the past 12 years.
- Math Education Ph.D. students are given valuable opportunities to do research within our core programs. Graduate student Nama Namakshi's project, "Experiencing Mathematics: a study describing the beliefs of three minority girls about their experience of mathematics at the middle school level," examined the factors that shape young students' perceptions and attitudes about math. Another graduate student, Lauren Hickman, is conducting research and development related to Mathworks math teacher professional development programs.
- Our students' research activities, conducted at the University during the HSMC program, are being presented at conferences and seminars across the country. Math Professor Jian Shen mentored the research paper, "Bounds on the Number of Huffman and Binary-Ternary Trees," which was presented at the American Math Society Fall Eastern Sectional Meeting in October of 2013. Math Professor Weizhen Gu mentored the paper, "Attainability of the Chromatic Numbers of Functigraphs," which was presented at the International Symposium on Pervasive Systems, Algorithms, and Networks (ISPAN) in December of 2012.

- We have a research paper, "Challenges In Implementing A New Math Curriculum," under review by the journal *School Science and Mathematics*.
- Mathworks Director Max Warshauer outlined a rich selection of research topics in his white paper, "A Modest Research Proposal," published in the January 2013 issue of the *Notices of the American Math Society*.

Building Connections

- In September of 2012, Texas State's Mathworks HSMC program was 1 of only 26 worldwide recognized and in attendance at the inaugural Google Roots In Science & Engineering (RISE) Global Summit in New York City.
- Hiroko Warshauer, Mathworks affiliated faculty, was promoted to the tenure-track position of Assistant Professor within the Math Department. She will lead research initiatives across all Mathworks programs, and was the recipient of a Research Enhancement Program (REP) grant to conduct research about the Mathworks teacher professional development program.
- Jim Bell, Professor in the McCoy College of Business Administration, worked with Andrew Hsiau, Assistant Director, to launch an entrepreneurship component with the HSMC program in the summer of 2013.
- Dick Boehm, Professor of Geography, included Mathworks faculty in a proposal to the NSF to introduce innovative ways of including geospatial technology into math teacher preparation.
- During the 2012-2013 school year, Mathworks summer math programs landed media coverage for Texas State in the *Austin Business Journal*, *Austin American-Statesman*, *San Marcos Daily Record*, *Hays Free Press*, and *Community Impact Newspaper*.
- Mathworks faculty established international relations in Indonesia during January of 2013, visiting four different universities and participating in exchanges with faculty and students.



Faculty engaged in research

During the HSMC program, we engage faculty from Texas State and professionals from other institutions to advise research. This past summer, 10 research advisors helped to produce the following research papers:

- Eugene Curtin, Professor, Texas State Math Department mentored: "A Game of Tri: A Graph Theoretic Generalization of Hex" by Leslie Tu, Selcen Yuksel, and Michaela-Taylor Williams
- Alex White, Professor, Texas State Math Department mentored: "A Novel Statistical Representation of Education and Development to Improve Overall Performance" by Robert Tung, Brian Chen, and Brandon Alston
- David Snyder, Professor, Texas State Math Department mentored: "Using Homologous Simplicial Complexes to Model Genomic Data" by Jessica Wang, Victor Zhou, and Ying Liu
- Lucas Rusnak, Lecturer, Texas State Math Department mentored: "A Characterization of Balance in Oriented Hypernetworks via Generalized Signed Walks" by Angie Rao, Vinci Chen, and Alex Yang
- Gary Beal, Professor, Texas State Chemistry and Biochemistry

Department mentored: "Mathematical Model for Defect Generation in Convective Self Assembly of Nanospheres" by Brian Xu, Vincent Liu, and Eita Yamaguchi

- Ziliang Zong, Professor, Texas State Computer Science Department mentored: "An Accurate Determination of Power Profiles for HPC GPUs" by Linda Zhang, Leslie Tu, and Paul Cruz
- Carl Fisher and Eumi Pyun of the 3M Company mentored: "Generating Molecular Solubility Predictors Using Quantitative Structure Activity Relationships" by Amber Guo, Justin Zhang, and Angela Feng
- Luyi Sun, Professor, University of Connecticut, formerly at Texas State, mentored: "On the synthesis and predictive modeling of stable pigments utilizing silica extracted from rice husks biowastes" by Susan Xu, Lily Xu, and Caroline Gao
- Edward Early, Associate Professor, St. Edward's University, mentored: "Maximizing the Number Of K-Sets" by Weiwei Chen, Jessica Yu, and Patrick Guo
- Sarah Spikes, software developer at Udacity, HSMC alumna, mentored: Developing an Online Interactive Guidance System through Axiomatic Proof" by Amy Kang, Aditya Jain, and Rebecca Chen

BUILDING ALGEBRAIC FOUNDATIONS

Math Explorations: middle school math curriculum



The goal of the *Math Explorations* curriculum is to engage all students in doing mathematics at a high level, and to ensure that the needs of all students are addressed. The curriculum is based on five *Guiding Principles* that are grounded in research and proven in classrooms.

Research has shown that student success in mathematics relies on more than just the choice of textbook. In order to raise the level of math achievement for all students, we must address teacher training, the school environment, administrative support, and parental involvement. Together we can provide high quality math learning opportunities to students of all backgrounds.

MATHWORKS CURRICULUM GUIDING PRINCIPLES

- Doing mathematics is about making sense of, and thinking deeply about, fundamental concepts.
- Teachers need to establish a classroom culture where students are not afraid of failure.
- Psychological factors and student beliefs need to be addressed, nurtured, and developed.
- Communication between students and teachers is critical for learning.
- Dispositions and external factors are powerful and need to be taken into account.

MATH EXPLORATIONS

What teachers are saying about Math Explorations:

"I really like the fact that most of the concepts are explicitly explained in the textbook. It uses correct mathematical notation. It doesn't water things down. It's trying to get kids to rise to the higher level." - San Marcos Middle School Math Teacher

"A big part of the Mathworks philosophy is getting the kids to be problem-solvers instead of answer-seekers. The problems are very rich. They have to think about the math, they have to read carefully, and apply knowledge of variables and the content." - San Marcos Middle School Math Teacher

"The textbooks: I love how the chapters begin with a 'launch' to stimulate thinking. Then it goes into the lesson with good examples explaining the processes for the concepts. Finally, it has problems that range from the easier ones to more complicated ones. - Midland Middle School Math Teacher

Math Explorations textbooks placed on TEA State Adoption List



We are delighted to announce that the *Math Explorations* textbooks have officially been placed on the state adopted list for instructional materials under Proclamation 2014 of the Texas Education Agency (TEA)! The textbooks have been approved for 6th, 7th, and 8th grade mathematics.

This review process involved updating the textbook contents to the new Texas Essential Knowledge & Skills (TEKS) math standards and alignment with the English Language Proficiency Standards (ELPS). This submission process started in December of 2012 and involved the careful work of the curriculum authors and Mathworks staff.

Critical support for the research and development of the curriculum was provided by the Meadows, Sid W. Richardson, KDK-Harman, and Kodosky Foundations.

Being on the stated adopted list means that the Mathworks curriculum has received a "stamp of approval" by

the State Board of Education (SBOE). The textbooks were also externally evaluated by TEA's reviewers to verify content alignment with the state's math standards.

This presents a tremendous opportunity to market, distribute, and implement the curriculum across the state of Texas. Products on the state adopted list receive increased visibility and recognition by district administrators. Ultimately, the *Math Explorations* textbooks give students of all backgrounds the opportunity to build a solid mathematical foundation, and prepares them for success in middle school math and algebra.



DEVELOPING MODEL PROGRAMS

Mathworks Algebra Program (MAP)

We partnered with the San Marcos school district during the 2012-2013 school year, giving all students at Miller Middle School the opportunity to use the *Math Explorations* curriculum. We also provided professional development to the math teachers at Miller during the summer and school year. Although the district has now chosen to use the same curriculum at both of its middle schools, rather than *Math Explorations* for one school, we are encouraged by the gains in algebra readiness achieved by the Miller students (see chart on opposite page).

With the state adoption of *Math Explorations*, we have already had numerous districts ask for textbook samples as part of their curriculum review process. We look forward to partnering with new schools across Texas, and helping students of all backgrounds establish new levels of achievement in mathematics understanding.

We now focus on further research and development of our replicable model, the Mathworks Algebra Program. The three major components are Teacher Professional Development, Mathworks Math Academies, for after-school or the summer, and the “Critical Elements of Success”. This model will give schools across Texas an action plan on how to implement the curriculum and establish a successful math program for middle school students.

The KDK-Harman Foundation, the Sid W. Richardson Foundation, and the Meadows Foundation provided critical support for the first year of the MAP project. Grant funding supported faculty, graduate students, and future teacher trainees, in addition to providing younger students the opportunity to attend the Mathworks summer math programs. The KDK-Harman and Richardson Foundations have provided continued funding for future years of the project.

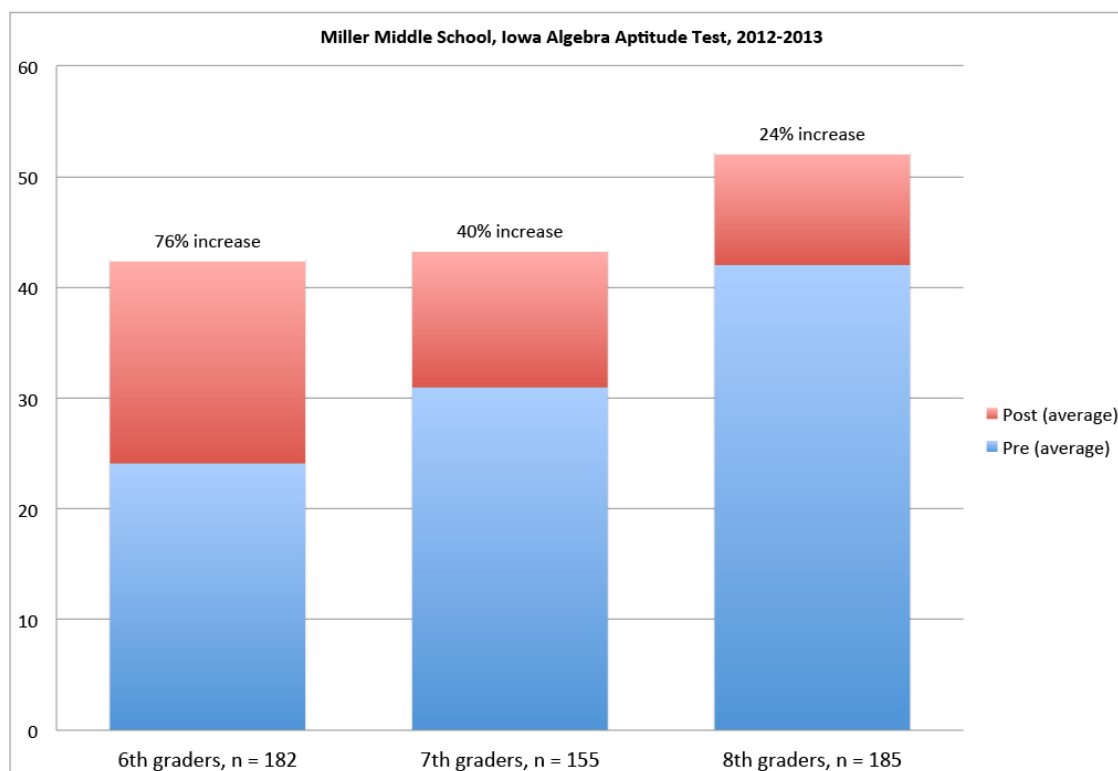
PREPARING STUDENTS FOR SUCCESS IN ALGEBRA AND BEYOND

"Midland ISD has had the pleasure of working with the Texas State University Mathworks Program for the past three years. Texas State University has provided many of our 6th through 8th grade teachers with excellent training in problem solving and algebraic reasoning. MISD held two highly successful summer math camps using the Mathworks model in the past and is looking forward to our third camp in June 2012...During the 2009-2010 and 2010-2011 school years, the Math Explorations Part 2 curriculum was utilized in our Pre-AP 7th grade math classrooms and the Commended Performance rate on the math TAKS increased both years...Midland teachers and students will continue to reap the benefits for years to come." - **Secondary Math Supervisor in Midland**

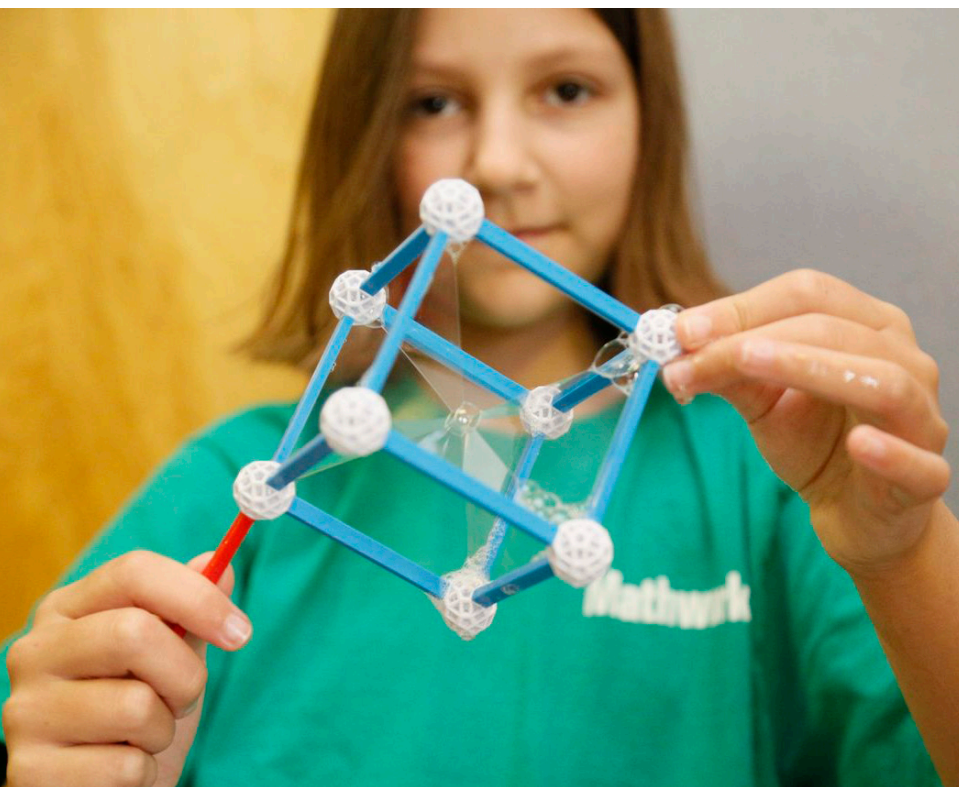
"It's imperative that the methods and materials from the summer camps make their way into the mathematics curriculum so that everyone can benefit from a much higher-level of understanding." - **Jeff Kodosky, Mathworks Advisory Board member, co-founder of National Instruments**

"I am excited about Mathworks because of the demonstrated effectiveness of introducing algebra concepts in 6th and 7th grade math classes" - **Bob Rutishauser, Mathworks Advisory Board member, former CFO of MCC**

The Mathworks Algebra Program (MAP) increases students' readiness for algebra and beyond. Use of the Mathworks *Math Explorations* curriculum is strongly correlated with gains in algebra readiness. These students are very well prepared to succeed in algebra, building a strong foundation for future degrees and careers that call for analytical reasoning, problem-solving, and the confidence to tackle new problems.



The chart above shows the recent gains in algebraic skills achieved by San Marcos students, as measured by the Iowa Algebra Aptitude Test. Students at a comparison school achieved percentage gains of 70%, 44%, and 12% in the 6th, 7th, and 8th grades, respectively.



MOTIVATING YOUNG STUDENTS

Half-day Junior Summer Math Camp program

"Math Camp has expanded my knowledge in algebra and other mathematical ideas. I have been here for three years and each year I have done better in my next grade because I have attended Mathworks."

- Sabrina, 7th grader from San Marcos in the JSMC

"Our daughter has enjoyed going for three years now. This program is something that she looks forward to each summer. She really has an understanding of math that will help her in her studies and we have the math camp to thank for that!" -
parent of a JSMC student

"I liked this camp a lot because I had the opportunity to delve deeper into the mathematical world." -
David, 8th grader from Austin in the JSMC



The 2013 half-day JSMC program in San Marcos was once again a great success! More than 180 students from the 4th - 8th grades attended the summer math program, building up their problem solving and algebraic skills.

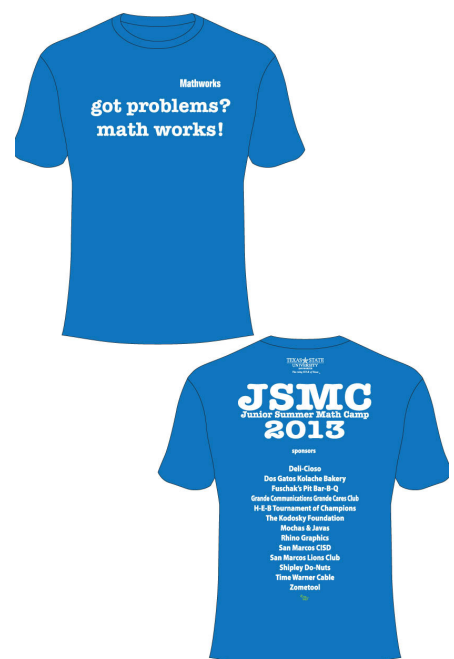
This past summer, we received the help of more than 10 local businesses, who provided in-kind and financial support for the 2013 program. More than 95 students attended the program on a scholarship, providing them access to a high quality summer academic program. We make significant efforts to serve the students of San Marcos, where more than 50% of the students are from socioeconomically disadvantaged families, and 15% of all families live under the poverty level.

The students gain incredibly valuable skills in mathematical reasoning and

thinking, developing their confidence and abilities to succeed in the following school year.

During the two weeks in early June, students explored number lines, plotted functions, and solved algebraic equations. We also hosted a Parent Open House one morning, giving the local community a glimpse of what the students are learning. Students also had the opportunity to design the camp t-shirt for next summer's program!

A new program that we launched in 2013 is a half-day JSMC program held at the Texas State University Round Rock campus, serving more than 40 young students. This program had tremendous success and we plan to continue it for years to come.



RAISING THE LEVEL OF ACHIEVEMENT

Residential Junior Summer Math Camp program

"I actually learned why something is the way it is, instead of just learning the theorems and formulas and plugging things in." - Claire, 7th grader

"We appreciate that the program gave Linda such an opportunity to learn and grow with her peers. The professors are very knowledgeable and patient. The program gave her a great degree of challenge far beyond the regular school math curriculum." - parent of student in the program



The 2013 Residential JSMC program hosted 40 middle school students, including four participants from Indonesia. Students developed their problem-solving abilities by working individually and in groups. Morning lectures by university professors were accompanied by afternoon problem sessions led by undergraduate mentors.

Students also had time to explore the university campus, with daily recreation time and weekend guest speakers and field trips. The immersive program gave students an early experience in college campus dorm life. As part of the program, we also trained a team of four students to compete in the annual Primary Math World Contest in Hong Kong.

Students shared the joy of discovery and exploration with peers from across the state of Texas. Each night they worked in Study Groups under the guidance of an undergraduate mentor, who themselves are majoring in math, science, or engineering in college. We make significant efforts to recruit females and students from other under-represented demographics in the math and science fields. The program's student body has been, on average, 50% female, as well as 50% socioeconomically disadvantaged.



WORLD CHAMPIONS!

We engaged more than 400 young students in problem solving and creative thinking through our 2012 Mathworks Math Contest (MMC) administered in October of 2012. Through the MMC, we selected a team of four students to compete in the annual Primary Math World Contest (PMWC) in Hong Kong. The team of Alex Liu (Houston), Linda Yu (Houston), Shreya Thipireddy (Houston), and Vinjai Vale (Plano) attended the 2013 residential JSMC program before going on to compete in the PMWC in July. Monica Martin of Miller Middle School and Nate

Dean, chair of the Texas State math department, accompanied the team. The team won the 2013 PMWC outright, placing ahead of more than 40 other teams from around the world. Liu and Vale also achieved perfect scores on the individual portion of the PMWC. This is the 11th time that Mathworks has fielded a team in this international competition, and we congratulate the students for their achievement!





INSPIRING TOMORROW'S LEADERS

Honors Summer Math Camp program

Our flagship Honors Summer Math Camp (HSMC) program attracts students from across Texas and beyond to do in-depth mathematics on the Texas State University campus. We engage 9 to 10 faculty each year in doing research with these students, generating scholarly activities while inspiring the next generation of leaders in science, technology, engineering, and mathematics.

We make significant efforts to recruit females and students from other demographics traditionally under-represented in the STEM fields. Thanks to a Texas Workforce Commission grant, we were able to award 20 full scholarships to Texas students to attend the 2013 program, providing economically disadvantaged students an opportunity they would otherwise not have.

Some highlights from our 2013 program included:

- Established partnerships with high-tech companies, including 3M and Silicon Labs. A team of scientists from

3M mentored a research project while Silicon Labs provided tremendous support for the research projects, camp counselors, and program scholarships.

- Launched an entrepreneurship component within the program, with the help of Texas State business professor Jim Bell. Students had the opportunity to develop and pitch original business ideas to entrepreneurs.
- Hosted 60 students and 16 undergraduate mentors from across Texas, and the nation, in an immersive summer math program and early college experience.
- The inaugural "Sarah & Ernest Butler Scholarship" was awarded to Kassy Martinez of McAllen. The "Herb Carter Scholarship" was awarded to Brandon Alston of Houston. These scholarships enable students of all backgrounds to attend the HSMC program.

THE HSMC: ELEVATING THE PROFILE OF TEXAS STATE UNIVERSITY

"This program gives us a mini college experience. Not only are we becoming more familiar in studying in places away from home, but we are also learning to be independent. The HSMC has also influenced my career choice. Although I do not have a specific choice in mind, I have decided that it would be a STEM career."

- Kassy, 10th grader from the Rio Grande Valley

"Not only does the HSMC program teach a high level of mathematics; it combines math with business in an extremely unique way. Teaching young students the art of the elevator pitch is an invaluable lesson. To communicate an idea in a quick and concise manner is a quality very few adults in the business world possess; to teach that concept at this level combined with a high level of mathematics truly sets Texas State University apart."

- Monica McNabb, Texas State alumna, CEO of McNabb & Co realty.

"The Honors Summer Math Camp at Texas State University is a learning environment that surpasses any precollege program that I have ever seen. As an engineer and business executive, I am extremely impressed with the level of creativity and attention to detail included in the entrepreneurship projects, and look forward to seeing these students perform at an extremely high level in their future academic and business careers. Mathworks is a true win-win for young students and Texas State University."

- Earl Ingram, Ph.D., P.E., President, Ingram Readymix, Inc.

"Young students that choose to spend their summers furthering their education clearly display a level of self-motivation that will serve them well throughout their lives. The Honors Summer Math Camp, and its entrepreneurship projects, challenge students to comprehend advanced concepts and convert ideas into marketable and operational business strategies. Mathworks is obviously attracting some of our brightest youth to Texas State University prior to completing their high school education."

- Bruce Ingram, Founder, Ingram Readymix, Inc.

"Our daughter was engaged academically and socially, something which she had not experienced before. For the first time she [our daughter] had friends with similar interests and academic goals. We have never seen her more engaged and animated than this past summer. She has always been a good student and ambitious, but her experience this summer was in many respects transforming. Mathworks has truly expanded her horizons."

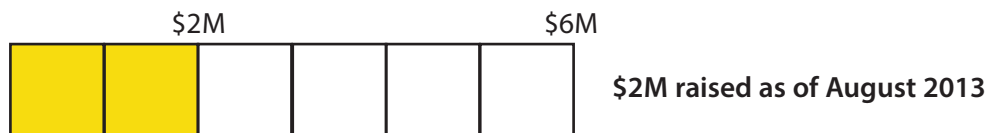
- Cecilia Castillo, Assistant Professor of Political Science at Texas State

"Mathworks is one of the most amazing programs in education today. It benefits graduates because they have an opportunity to give back by teaching to a new group. It benefits San Marcos by bringing in 60 of the brightest math minds to spend 6 weeks in San Marcos. It benefits Texas State because Texas State has the opportunity to recruit internationally the best math minds available. It benefits the business community because the program cultivates potential employees for those businesses who are desperate to employ math minded graduates. And, lastly it benefits the attendees. They come from the rich and the poor, they cover all nationalities, and they come with amazing adult brains but with the problems of today's children. In Mathworks camp they have the opportunity and the support system to solve personal challenges of growing up in today's world as well as solving the complicated math problems so needed in today's universities and businesses. Mathworks is totally worth the money, time, and effort required for such a successful program."

- Lisa Spencer, former President of the Friends of Fine Arts & Communication and Advisory Council member of Communication Studies at Texas State

SUSTAINING A LEGACY OF EXCELLENCE

Mathworks Endowment Campaign



**Join us to provide ongoing opportunities to students of all socioeconomic backgrounds!
Together we can develop bold thinkers who will take on the challenges of tomorrow.**

The U.S. needs to maintain its creative and competitive edge in math and science. Too few students are graduating with the math skills required to maintain parity, much less leadership, in the science, technology, engineering, and math (STEM) fields so vital to our future. Many students are dropping out of school altogether because they are not given the proper foundation in algebra, which is a gateway to higher-level problem solving and ingenuity. Mathworks is striving to change all that, with its research and development of model mathematics education programs for students and teachers.

In response to our nation's most urgent need for improved math and science skills, we must give opportunities to young students to reach for higher levels of mathematics achievement.

We invite you to join us and help to achieve this goal by becoming a Mathworks supporter. Funding is needed to permanently sustain Mathworks core programs, so that current and future students may be given opportunities to develop their ambitions and aspirations. There is a particular need among students from disadvantaged communities who do not have access to high quality learning opportunities. Without the support of visionary

organizations and individuals, these students would have their potentials wasted.

The KLE Foundation and Kodosky Foundation have pledged match challenges to support the Mathworks Legacy Campaign. Support for building and sustaining a network of Mathworks Algebra Program (MAP) sites will be provided by the earnings from the endowments established.

We deeply thank those who have supported our programs for today's students, and ask that you join us in our efforts to ensure sustained opportunities for tomorrow's students. Together we can help develop all students into bold thinkers who are ready to take on the challenges of today and tomorrow and be leaders in the STEM and business fields.

Donate **today** to the
Mathworks Legacy Campaign

Make a check out to
"Texas State University - Mathworks"

Donate online at
developmentfoundation.com/donate.php?fund=67832

Mathworks alumni give back to Texas State

Alumni and parents donated more than \$36,000 to Texas State during the most recent fiscal year, supporting the Mathworks endowment. This was a 20% increase from the previous year. Thanks to a 3:1 matching on alumni donations pledged by the KLE Foundation as part of a \$350,000 match challenge, this resulted in more than \$100,000 being donated to Texas State, in support of the Mathworks endowment. The Kodosky Foundation's ongoing match challenge of \$1.5M for the Mathworks endowment also provided a tremendous boost, spurring on giving to Mathworks and the University.

Endowment Donations

September 2012 - August 2013

Foundations & Individuals

Bruce & Gloria Ingram
Keith Hilles-Pilant
KLE Foundation
Kodosky Foundation
Lisa Lefkowitz
Mollusca Fund
Sam Baethge
Sarah & Ernest Butler

Alumni Donations

Angie Johnson
Araceli Fernandez
April Lim (for Josh Lim)
Ben & Judy Hsiau (for Andrew and Tim Hsiau)
Ben Salinas
Bill Whatley (for Daniel and Alex Whatley)
Bryan Eastin
Chong Jiang
Cody Patterson
Dong Li (for Hans Li)
Donna Ford (for Eric Ford)
Dung-Tsa Chen (for Weiwei and Eric Chen)
Fan-Hal Koung
Genbao Shi & Amy Chen (for Millie Shi)
Guzhao Li (for Eric Li)
Fred Thum (for Jasmine and Cameron Thum)
Helen Tang Paradise
Helen Zhang
Herb Carter (for Camiren Carter)
Hong Tian (for Kevin and Sunny Tian)
Hiulan Liu (for Daniel and Angela Wang)
Ilya Sherman
Jane Hedgepeth (for David Price)
Jeremy Warshauer
Jianwei Liu & Li He (for Dan and Ying Liu)

Jiming Zhang (for Helen, Alicia, and Justin Zhang)
Joseph Chen (for Athena Chen)
Kay & David Pruett (for Michelle Pruett)
Kazlowski Family
Kevin Y. Chen
Kuen Ming Chu & Mei Ling Wang (for Sophia Chu)
Lauren Lee (for Keving Chang)
Lisa Warshauer
Liyang Wu (for Alice and Catherine Liu)
Lynn Fan (for Robert Tung)
Nathan Warshauer
Norman Pai
Patrick Yu (for Jessica Yu)
Peggy & John Kalas (for Jeremy Kalas)
Peter Baen (for Jason and Grace Baen)
Richarda Momsen (for Moriah Momsen)
Sarah Spikes
Sharon Xie (for Bobby Shen)
Shuwei Gao & Xiaoyan Chang (for Eric Gao)
Sushovan Guha (for Siddarth Guha)
Tim Hsiau
Wenyaw Chan & Alice Chuang
(for Stephanie and Jeffrey Chan)
Xingya Wang & Yanmi Liu (for Jessica Wang)
Xiuhong Dai & Guanghui Hu (for Jennifer Hu)
Yang Mou
Yonghui Liu & Jane Huang (for Vincent and Vivian Liu)



OPERATIONAL FUNDING DONATIONS

Your operational funding donations helped us to award more than 100 scholarships for the 2013 summer math programs. Your support directly helped to provide opportunities to students to develop their critical and creative thinking. We thank the following organizations and individuals for their financial and in-kind support during the past fiscal year. Together we are developing the next generation of bold thinkers!

Operational and in-kind support

September 2012 - August 2013

3M Company

American Math Society Epsilon Fund

Bob Rutishauser

Delicioso

Dos Gatos

Eugene Curtin

First Impressions

Fuschak's Pit Bar-B-Q

Grande Communications Grande Cares Club

H-E-B Tournament of Champions

Herb Carter

Howard Falkenberg

Jenny Chen ALUMNI DONATION

Jian Wu (for Rebecca Chen) ALUMNI DONATION

Jim Smith

Kodosky Foundation, Jeff & Gail Kodosky

Kyoung & MinHo Chung (for Hannah Chung) ALUMNI DONATION

Lions Club of San Marcos

Mamacita's Restaurant & Cantina

Mochas & Javas

Rhino Graphics

San Marcos CISD

SchoolTutoring

Shipley Donuts

Silicon Labs

Texas State University

Texas Workforce Commission Summer Merit Program grant

The desJardins/Blachman Fund

The Meadows Foundation

Time Warner Cable Connect a Million Minds

Yat-Sang Hung (for Frances Hung) ALUMNI DONATION

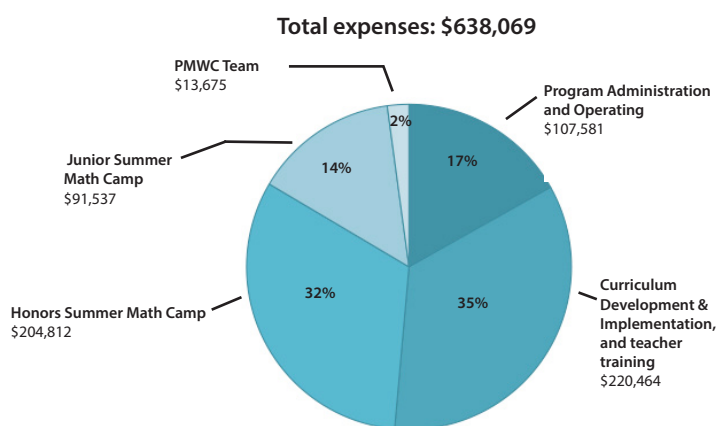
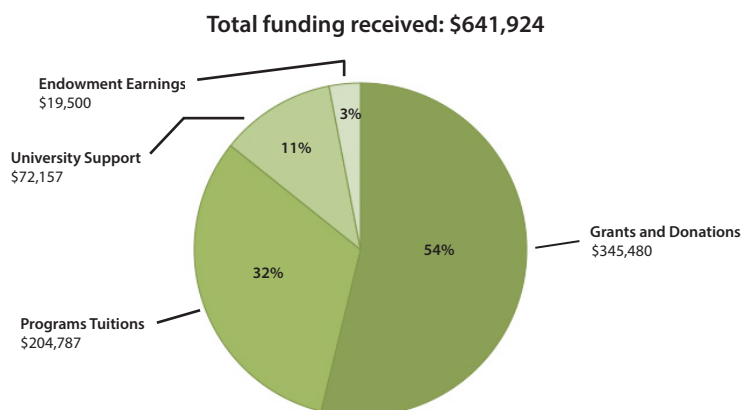


"I am very appreciative of the fact that there are scholarships offered, because if not for that then I wouldn't be able to send my child. He really learns and understands the material and he applies what he learns to the school year, and I have seen a huge improvement in his math academics. Thanks again for such a wonderful program!"

- Parent of a student in the 2013 JSMC program

FINANCIALS

September 2012 - August 2013



Thanks to your support for our endowment campaign and operational funding, we once again ended the fiscal year with a small positive cash flow. We do our utmost to conduct high quality math programs with the funding that we have. These programs are collectively feeding the STEM pipeline as we develop younger and older students, and equip math teachers with research-based and classroom-tested pedagogy and instructional materials.

We continue to grow our endowment with the ultimate goal of being independent of "soft funding" that currently makes up more than 50% of operating income. This soft funding is not guaranteed from year to year, and a decrease in operational grants and donations would mean that fewer students have access to high quality math programs to develop their mathematical abilities and mind-sets.

In order to address the challenges of the 21st century and beyond, we must continually provide opportunities to students of all socioeconomic backgrounds. We will need the innovation and leadership of bold thinkers. Ultimately, our programs are developing those leaders through mathematical development. Individuals who can make sense of the unknown and creatively collaborate with others to solve problems. As this parent of a student in the 2013 JSMC program noted, "Mathworks is a wonderful way to prepare and challenge my daughter, while making it fun and allowing her to think on her own, and providing the tools to do so."

Thank you for reading this Annual Report and thank you for your support of Mathworks.

What you can do right now to help: share this report with friends and family members!

Mathworks at Texas State University

Mathworks is a center for innovation in mathematics education at Texas State University. Our mission is to research and develop model programs and self-sustaining learning communities that engage K-12 students from all backgrounds in doing mathematics at a high level.

Mathworks programs raise mathematics achievements for all students, while developing future leaders in math, science, and engineering.

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