

Mathworks

2015 - 2016 Annual Report

Groundbreaking Research

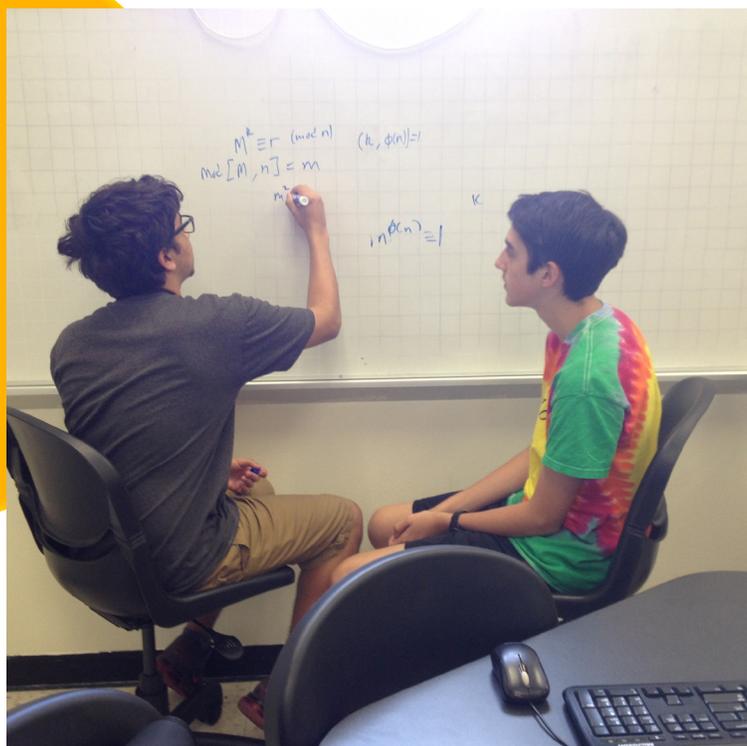


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Mathworks would like to thank the following people for their work in preparing this annual report:

Michelle Pruett
 Patty Amende
 Genesis Dibrell
 Samantha Yarto
 Sirena Thering
 Jocelyn Garza



From the Director

Dear Friends of Mathworks,

Happy New Year! In this report, we describe our three pillars—Math Camps, Teacher Training, and Curriculum Development. Each of these areas has seen continued accomplishments as Mathworks programs set a standard of excellence for our university and state. Some highlights include:

- A team of 4 Junior Summer Math Camp (JSMC) students finished tied for first in the Primary Math World Contest.
- 12 students (4 teams) were recognized as semi-finalists in the Siemens Competition for their research projects developed in the Honors Summer Math Camp (HSMC).
- A group of 6 students from Idea Quest public charter school in the Rio Grande Valley attended the Mathworks residential JSMC. The principal of idea Quest is Jose DeLeon, an HSMC alumni from 1992 and MIT graduate.
- The state-adopted Mathworks Math Explorations curriculum is now being used in 8 districts across Texas. New partnerships are being explored with Austin ISD.
- 6 graduate students worked with Mathworks teaching in the JSMC and continued working on research projects related to different parts of our programs.
- 10 teachers attended the Mathworks teacher professional development program where they learned new math content and pedagogy.
- 27 undergraduate Mathworks fellows participated in the JSMC as teaching assistants, and then took an afternoon seminar which provided an exciting introduction to teaching.

Mathworks programs are providing exciting research opportunities for graduate students and an early introduction to teaching for undergraduates. We are raising the level of mathematics for future teachers, while providing a foundation for developing new and innovative ideas in teaching.

Our goal is to establish Mathworks as a major research center in mathematics education, bringing together mathematicians and math educators with a shared vision of engaging all young students in doing mathematics at a high level. We have established a Parent Support Network to help us reach out to our alumni and new friends as the Mathworks family continues to grow.

We hope that all of our alumni will stay in touch, write us about what you are doing now, and consider visiting us in the summer, particularly on June 30, which we have designated as our alumni weekend.

All best regards,



Max Washauer
Director of Mathworks
Regents Professor of Mathematics

Mathworks 2016 Annual Report Groundbreaking Research

MISSION

The Mathworks 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 Washauer, Director
Terry McCabe, Associate Director
Patricia Amende, Business Manager
Michelle Pruett, Assistant Director

MATHWORKS STEERING COMMITTEE

Sarah & Ernest Butler
Howard Falkenberg
Jeff Kodosky
Bob Rutishauser
Mike Starbird

TEXAS STATE UNIVERSITY

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Christine Hailey, Dean, College of Science & Engineering
Susan Morey, Chair, Mathematics Department

MATHWORKS PARENT SUPPORT NETWORK

Wenyaw Chan and Alice Chuang
Hong and Shirley Tian
Kosta and Jelena Ilic
Jose De Leon
Kirtikumar and Achaca Deshpande
Diana Gu and Sheng Chen
Kan Tu and Joan Lu
Yolaine Pouhe

Original Research

High school students compete in premier math and science research competition

"Our process was to look at smaller groups or special cases, and from there try to generalize for an entire category of groups. This meant that we couldn't rule out any pattern we found among groups. Doing original research helped me expand my lateral thinking skills, since doing research means you don't know what you're looking for, but you're still trying to find something. It also taught me to be more meticulous and not to overlook any small patterns, because those could turn out to be what you're looking for."

– HSMC student



Photo credit to Amber Lu

"Doing original research with my team was very rewarding. Seeing students learning new subject and contributing to the topic was impressive."

– HSMC mentor

**\$163,225
scholarships
awarded in
2015 & 2016!**

"Because I want to be a mathematician, it prepared me enough to understand the difficulties and the tribulation one must undergo in order to be a successful researcher. Research has definitely empowered me as I continue to plan on being a mathematician in hopes of one day proving the Riemann Hypothesis."

– HSMC student

Honors Summer Math Camp

Second and third year students at the Honors Summer Math Camp (HSMC) conduct original research each year, beginning before camp and continuing beyond the summer. In 2016, a total of 12 mentors from Texas State and industry in the surrounding area mentored teams of two to three students. Each group presented their research at the end of the 6-week program, and submitted their work to the prestigious Siemens Competition in math, science, and technology.

We are pleased to recognize four projects that were recognized as semifinalists at the Siemens Competition:

- Junu Lee, Andrew Lu, and Sophia Sun, mentored by Eugene Curtin of the Texas State Mathematics Department, for their project “Applications of Grassmann Algebra on Laplacian Matrices and Their Properties”
- Gina Chen, Vivian Liu, and Kyle Wang, mentored by Lucas Rusnak of the Texas State Mathematics Department, for their project “A Generalization of Structural Degree of Imbalance and Complexity in Oriented Hypergraphs”
- Emily Chen, Surya Namboodiri, and Lillian Sun, mentored by Shuying Sun of the Texas State Mathematics Department, for their project “DNA Co-Methylation Patterns in Cancerous and Normal Tissues”
- Julia Jia, Catherine Li, and Angela Zhang, mentored by Ziliang Zong of the Texas State Computer Science Department, for their project “Exploring Energy Efficient Query Optimization Techniques for Databases Without Degrading Performance”

In 2015, eleven teams of students worked on original math and science research projects during the HSMC. Three teams were recognized as semifinalists and one team was recognized as a regional finalist, one of only 30 teams in the country to reach that level.

Semifinalist Teams

- Lillian Bu, Michelle Hamilton, and Nina Osipova, mentored by Ziliang Zong of the Texas State Computer Science Department, for their project “Energy-Aware Deep Learning for Image Recognition”
- Hans Li, William Liu, and Kevin Rao, mentored by Edward Early from St. Edward’s University, for their project “A Combinatorial Proof for the Rank-Unimodality of Poset Order Ideals”
- Christine Jou and Yagmur Yuksel, mentored by Ray Treinen of the Texas State Mathematics Department, for their project “Clusters of Floating and Sessile Drops in the Absence of Gravity”

Regional Finalists

- Eric Li, David Xiang, and Amber Lu, mentored by Lucas Rusnak of the Texas State Mathematics Department, for their project “Signed Path Matrices and Oriented Hypergraphic Generalizations”

“While I have always been an inquisitive and determined person by nature, the research project amplified both of those traits. Immersed in thought-provoking material, I greatly enjoyed the opportunity to delve into subject areas which I had not really experienced before... The exposure I gained into the more theoretical aspects of computer science was eye-opening, and I believe that the skills I gained from research have benefited me in facing other academic challenges.” – HSMC student

“With research, making mistakes or hitting a brick wall in the process does not mean that you have failed. Instead, it allows you to learn and approach the problem from a different angle. And perhaps you’ll have to try multiple methods before getting somewhere, but it will be worth the effort in the end. Thus, doing original research both stimulated my mind and strengthened my resilience when faced with difficult problems.” – HSMC student

Back to Their Roots

Cody Patterson, an alum of the 1998 Honors Summer Math Camp, has been working with Mathworks on research in math education at summer programs. Cody's history with Mathworks spans many years and many roles, including those of camper, counselor, teacher, and researcher. This summer, he worked with Hiroko Warshauer and Terry McCabe, researching pre-service teacher noticing at the Junior Summer Math Camp. Cody also investigated how high school students learn to write proofs with guidance of undergraduate counselors at the Honors Summer Math Camp.



Michelle Pruett is an alum of the 2007 Honors Summer Math Camp and has been with the program every summer since. She joined the Mathworks team full-time as Program Specialist in January of 2015, and became the Assistant Director in April of 2016. In 2016, Michelle was the site coordinator at the Round Rock location of the Junior Summer Math Camp for the fourth summer. She also taught the Honors Seminar course at the HSMC and accompanied the San Marcos team to the Primary Math World Contest in Hong Kong.



Former Students Return as Counselors

Alumni of the Mathworks camps returned as counselors in 2015 and 2016, as they do each summer. These counselors come back to us from universities including MIT, Harvard, the University of Texas, Texas A&M University, Texas State University, CalTech, SMU, the University of Florida, Duke, Williams College, Yale, Princeton, UC Berkeley, and even as far away as the University of Western Australia!

Thank you for your commitment to future campers!



Colloquium Guest Speakers



Sameer Deshpande

Mike Starbird

Susan Morey

Dan Shapiro

Photo credit to Amber Lu and Gina Chen

High school students attending the Honors Summer Math Camp (HSMC) heard talks by a variety of speakers, both in academia and industry. Students enjoyed learning about potential careers and fields of study. Talks ranged from pure mathematics to applications of mathematics to topics requiring critical thinking and analysis.

Steve McAdam
University of Texas
Bernoulli Numbers and Sums of k^{th} Powers

Dan Shapiro
Ohio State University
Centers of Mass

Mike Starbird
University of Texas
Cutting Cake for Greedy People: Clear Thinking to the Rescue

Susan Morey,
Texas State University
Hilbert and the Syzygy Theorem

Victor Cepeda
Sony
Video Game Design

Admiral Bob Inman
University of Texas
Life's Lessons

Sameer Deshpande
University of Pennsylvania
Van der Waerden's Theorem

Jeniffer Harper-Taylor
Siemens
Siemens Research Competition

Jim Bell
Texas State University
Entrepreneurship

Updated Format

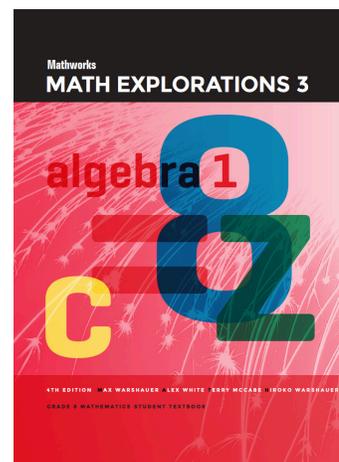
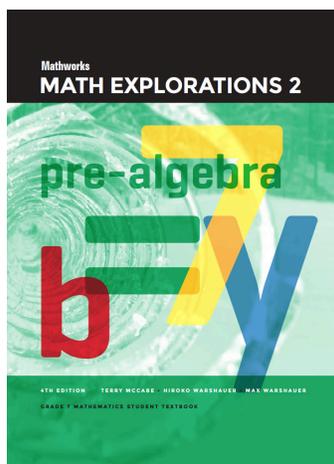
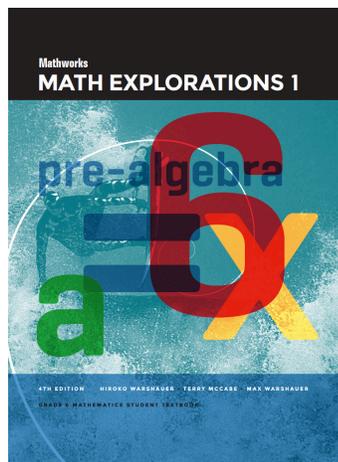
Math Explorations Middle School Curriculum

The Mathworks middle school curriculum has been updated! In 2016 *Math Explorations 1* and *Math Explorations 2* were edited and reprinted in a brand-new edition.

Math Explorations is a three-volume series for middle school math, grades 6, 7, and 8. These pre-algebra and algebra textbooks prepare students for success on the State of Texas Assessment of Academic Readiness (STAAR) and the Texas Algebra I End of Course (EOC) exam. They are aligned with the Texas Essential Knowledge and Skills (TEKS) for grades 6, 7, and 8 and are on the state-adopted textbook list.

The *Math Explorations* curriculum is research-based, classroom-tested, and developed by nationally renowned mathematics educators. It integrates learning from more than 25 years of summer math programs. *Math Explorations* engages young students in using pre-algebraic and algebraic ideas and includes hands-on, inquiry-based math activities that lead to in-depth problem solving in a well-sequenced order.

The year-long curriculum grew out of the Mathworks Junior Summer Math Camp, and now *Math Explorations* is used in public and private schools across the state, including El Paso Leadership Academy, Slaton ISD, Godley ISD, Lake Travis STEM Academy, Austin ISD, Idea Quest – Rio Grande Valley, Lago Vista ISD, and Coram Deo Academy. We look forward to continuing to partner with new schools, teachers, parents, and students.



"I want to commend the authors. They worked hard to put together a book that goes beyond rote memorization and encourages students to think more deeply about mathematical topics."

- Math Explorations Teacher

"I have two students in particular who never liked math, but with Math Explorations, they love it!"

- Math Explorations Teacher



Problem Solved!



- 28 Fellows
- + 19 Master Teachers
- + 10 TPD Attendees
- + 169 Campers

1 Fantastic JSMC!

Half-Day Junior Summer Math Camp (JSMC)

Mathworks again offered two locations for the half-day program: San Marcos and Round Rock. 2016 marked the first year that both camps offered all five levels for students in grades 4 - 8.

During this two-year period, \$113,805 in scholarships were awarded to students attending camp!

2015 Camps

San Marcos: 194 students, 12 Master Teachers, 4 Teacher Professional Development (TPD) Attendees, and 22 Fellows

Round Rock: 68 Students, 4 Master Teachers, and 8 Mathworks Fellows

2016 Camps

San Marcos: 176 Students, 13 Master Teachers, 10 TPD Attendees, and 24 Fellows

Round Rock: 93 Students, 6 Master Teachers, and 4 Fellows

Student Quotes

"My teacher is pretty awesome. He is super fun and makes me understand things better. It is making me get prepared for school!"

- Student, Level 2, Junior Summer Math Camp

"She was good at teaching and finding ways to teach the class in a fun way and keep students interested. My class was good at working together and working independently. I liked when we were given a problem then debated the answer."

- Student, Level 4, Junior Summer Math Camp

"Math camp challenges me in a different way. We did more logic problems here. We also played more games."

- Student, Level 5, Junior Summer Math Camp

**\$113,805
scholarships
awarded in
2015 & 2016!**

Mathworks Fellows Quotes

"Working with a student the past two weeks made me realize how persistent and hardworking the children can be. Persistence was the guiding principal in play in my interactions with this student."

- Fellow, Mathworks JSMC

"Math camp simply makes me a better teacher. We spend time with the kids in a less stressful setting, get the chance to watch master teachers, make connections with a wonderful faculty, and take home numerous teacher resources!"

-Fellow, Mathworks JSMC, will begin teaching this fall

Teacher Professional Development (TPD) Attendee Quotes

"I really like hearing what other people have to say. It allows me to see if I noticed or experienced something others have and also allows me to become aware of situations and thoughts I didn't realize before. We were also able to compare what we saw in class and that's the part I really liked. I felt like we got a better understanding of our class because we were able to reflect together."

- In-Service Teacher, TPD Program

"The camp was helpful because it allowed me to see strategies implemented during an actual classroom environment."

- In-Service Teacher, TPD Program

"(Writing reflections) helped me think my thoughts about what happened (in class). I think I can use this as a tool for myself to improve my teaching strategies and reinforce strong ideas."

- In-Service Teacher, TPD Program

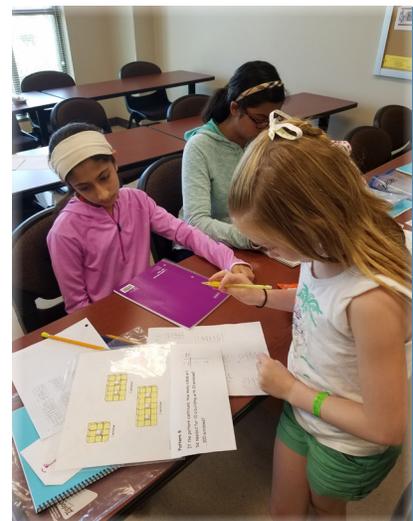
Master Teacher Quotes

"I loved the small group reflection time in the individual classrooms. As a master teacher, I felt it was helpful to listen to the observations from the other professional development teachers and fellows. Many times they would see things that I missed."

- Master Teacher, Level 1 JSMC

"I love Mathworks."

-Master Teacher, Junior Summer Math Camp



Rising to the Challenge

Residential Junior Summer Math Camp (JSMC) Program

The 2016 Residential JSMC program hosted 43 middle school students. Through an ongoing partnership with Ridwan Saputra, 2 students from Indonesia were able to attend.

Campers in the Residential JSMC worked individually and in groups to develop their problem-solving skills. They took classes taught by university faculty, and participated in problem sessions led by undergraduate counselors. Students worked in groups of 4 on daily problem sets with the guidance of a counselor.

While on the Texas State University campus, students were able to get a taste of dorm life. They explored the university, visited the student rec center, and heard talks from guest speakers.

At the Residential JSMC, a team of four students from Texas trained to compete in the Primary Math World Contest (PMWC) in Hong Kong. In both 2015 and 2016, the team representing Mathworks won the Overall Championship and the Po Leung Cup Championship!

Students from across Texas and the world shared the joys of discovery and exploration. Many of the students will be returning for another year, or attending the Honors Summer Math Camp when they reach the 9th grade.



**\$18,800
scholarships
awarded!**

2016 PMWC Team

Amy Zhou, Michelle Wang, Andrew Cai, Pierce Lai



Awards: Overall Champion and Po Leung Cup Champion!

2016

"What they learned from the Mathworks PMWC program is far beyond math. They saw the passion from you and they learned how to be good team players. The trip definitely broadened their horizons."

- Parent, 2016 PMWC Team

"I will never in a million years ever forget my trip to Hong Kong. Never would I ever have a best friend from South Africa, or been able to work with such amazing people. Thank you Cody Patterson, Max Warshauer, Michelle Pruett, and Hiroko Warshauer for helping us prepare and making our trip one of a kind."

- Student, 2016 PMWC Team



2015 PMWC Team

Bella Xu, Edward Lu, Benjamin Wright, Radha Malhotra



Awards: Overall Champion and Po Leung Cup Champion!

2015

"What a fun adventure! The experiences the kids had are far more beyond winning a math competition. They learned how to work together as a team, how to interact with others from various backgrounds. They even learned how to bargain at the Hong Kong night market. Our daughter will remember this fun journey forever!"

- Parent, 2015 PMWC Team

Graduate Research Publications



"Mathworks has influenced me in so many positive ways. It has shaped my graduate school experience by affording me the opportunity to collaborate on research projects with professors and fellow students, be mentored by advisors, work with K-12 students, develop curriculum, and be part of a thriving community of practice working to understand and improve mathematics education. I have forged lasting friendships and have been supported and encouraged throughout the time I have worked at Mathworks. The environment, which values deep thinking about mathematics and a love for the subject, is the type of environment I now wish to work in after graduation."

- Math Education PhD Student



Conferences

The 13th International Congress on Mathematical Education (ICME-13) was held in Hamburg, Germany July 24 to 31, 2016. The Mathworks team consisting of Hiroko Warshauer, Christina Koehne (PhD student), and Christina Starkey (recent PhD graduate) presented a talk entitled: "Addressing the Needs of Gifted Students: Opportunities for Students, Teachers, and Researchers." The presentation discussed Texas Mathworks summer math camps as an example of a program that connects researchers with pre-service and in-service teachers, educates gifted and regular students in an intense immersion doing mathematics, and provides graduate students with the opportunity to have research and teaching experiences with this unique population. The presenters offered their experiences, insights, activities, and discussed research studies and ideas that resulted from working with students in these math camps.

The Association of Mathematics Teacher Education (AMTE) held their 21st Annual Conference from February 9-11, 2017 in Orlando, Florida. The Mathworks team presented a talk on "Focusing Preservice Teacher Noticing Towards Productive Struggle." This talk, which was given by Hiroko Warshauer, Christina Koehne (PhD Student), Nama Namakshi (recent PhD graduate), and Sonalee Bhattacharyya (PhD Student), was about the ongoing analysis of pre-service teachers' noticing of productive struggle that took place at a 2-week summer math camp for middle and elementary school children. This presentation gave insight into the initial findings that were presented at the 38th Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA).

The 38th Annual Conference of the North American Chapter of the International Group for the Psychology of Math Education (PME-NA) 2016 was held in Tucson, Arizona from November 3-6, 2016. The Mathworks team of Hiroko Warshauer, Christina Koehne, Sonalee Bhattacharyya, and Nama Namakshi presented a study that examines how two important aspects of classroom instruction, teacher noticing and productive struggle, can be introduced to and developed in preservice teachers (PSTs). Their study examined PSTs in a 2-week professional development experience associated with a summer math camp for elementary and middle school students. Findings suggested that an awareness of productive struggle can be developed through extending the borders of teacher noticing to include this construct. Thirteen PSTs were immersed in a setting that allowed them to observe teaching, interact with students, and reflect on both their actions and the classroom setting. The PSTs reflected on and discussed the development of their own observations of student thinking and the role productive struggle can play in both teaching and learning mathematics.

Publications

"What's in a Cube?" (In Press)

- Authors: Zunker, C., Starkey, C., Namakshi, N., and Bhattacharyya, S.
- Published: Mathematics Teacher.

This activity ties algebra, geometry, counting, and probability together through an exploration of the mathematics of manipulating an $n \times n \times n$ cube (composed of unit cubes) in several ways. The visually appealing cube provides an elegant and simple platform to explore both simple and more sophisticated counting.

"Attention to Detail: Norms for Proof Evaluation in a Summer Mathematics Program"

- Authors: Patterson, C., Cui, X.
- Published: accepted for the 2017 RUME conference.

In this study, by utilizing cognitive interviews during which students and mentors in a summer mathematics program evaluate number theory proofs written by a hypothetical student, we explore the norms by which they evaluate proofs of theorems in number theory.

"Mystery Fractions" (February 2016)

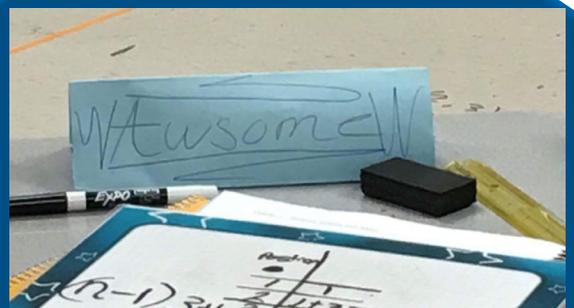
- Authors: Bhattacharyya, S., Namakshi, N., Zunker, C., Warshauer, H., and Warshauer, M.
- Published: Mathematics Teaching in the Middle School
- Read the article now! <http://www.nctm.org/Publications/Mathematics-Teaching-in-Middle-School/2016/Vol22/Issue1/Mystery-Fractions/>

Making math more engaging for students is a challenge that every teacher faces on a daily basis. We are constantly searching for rich problem-solving tasks that cover the necessary content, develop critical-thinking skills, and engage our students' interest. This Mystery Fraction activity focuses on a key number theory concept of divisibility and connects it to many important concepts in middle school mathematics, including place value, fraction sense, scale factors, reasoning and proof, and counting.

"Mystical Magic Squares" (February 2015)

- Authors: Nama Namakshi, Sonalee Bhattacharyya, Christina Starkey, and Jeanne-Marie Linker
- Published: Mathematics Teaching in the Middle School
- Read the article now! <http://www.nctm.org/Publications/mathematics-teaching-in-middle-school/2015/Vol20/Issue6/Mystical-Magic-Squares/>

"Math is so boring!" How many times have we heard this statement from our students? As teachers, we are constantly looking for different activities to interest our students in mathematics and to convey the true richness and diversity of the subject.



Endowment for the Future

Donate today to the Mathworks Legacy Campaign

With your support, together we can help:

- Provide mathematical learning opportunities to students of all backgrounds
- Provide professional development opportunities to mathematics teachers in middle schools
- Provide research opportunities to Mathematics Education Ph.D. students who can make an impact on the future of mathematics education

How to donate:

Make a check out to
Texas State University - Mathworks
601 University Dr., ASBS #110
San Marcos, TX 78666

Donate online at:
www.txstate.edu/mathworks

**28 by 28
Campaign!**

Mathworks Endowment Campaign

\$6M Goal
\$3,576,968 raised
as of August 2016

Thank you to everyone that donated to the program during our "\$28,000 by the 28th Annual Honors Summer Math Camp" program. To date, the program has raised \$31,000.

Your donation helped provide funding to students who would not otherwise be able to attend due to financial limitations. Your generosity gives students from all backgrounds the opportunity to attend camp and learn mathematics at a high level.



Operational and in-kind support September 2015 - August 2016



Grande Communications



Time Warner Cable



Time Warner Cable

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| 3M Foundation | JSMC-R Student | Silicon Laboratories, |
| AMS | Kang, Amy | Inc. |
| Anonymous | Kazlowksi, Barbara | Smith, Jim & Jare |
| Austin Community | Kazlowksi, Kris | Spikes, Sarah |
| Foundation | KDK Foundation | Texas Workforce |
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| Cadence Matching Gift | Foundation | The Meadows |
| Program | KLE Foundation | Foundation |
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| Chen, Athena | Li, Dong | Time Warner Cable |
| Chen, Dung-Tsa | Li, Guzhaio | Vanguard Charitable |
| Chen, Jenny | Li, Jie | Endowment |
| Chen, Stephanie | Malachosky, Ed & June | Wang, Chieh Chung |
| Chen, Yen-Hung | Malecha, Gregory M. | Wang, Lifeng |
| Chuang, Alice | Mamacita's Restaurant | Warshauer, Amy |
| Deshpande, Kirtikumar | McCabe, Terry | Warshauer, Max & |
| Eastin, Bryan K. | Meadows Foundation | Hiroko |
| Flowers, Kevin | Melecha, Greg | Wei, Grant |
| Ford, Eric | Mollusca Fund | Whatley, William |
| Fortini, Barbara | Momsen, Mark & | Wu, Liying |
| Fu, Yuhong | Richarda | Wulff, Fred |
| Gao, Shuwei or Chang, | Morey, Susan | Xihung Dai & Guanghui |
| Xiaoyan | Mu Alpha Theta | Hu |
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| Hsiau, Andrew | Salisbury, Jean Ann | Yuhong, Fu |
| Hung, Sang | San Marcos Lions Club | Zhang, Jiming |
| Hurowitz, Hope | Sherman, Ilya | Zhonghong, Jiang & |
| Ingram Family | Shi, Millie | Chenglan Han |
| Foundation | | |

Operational Funding Donations

Thanks to the financial and in-kind support from organizations, foundations, alumni, and other committed individuals, Mathworks is able to provide quality programs that promote mathematics education and research.

Together we were able to serve 737 campers, 14 in-service teachers, and 61 pre-service teachers in 2015 & 2016. Mathworks delivers opportunities for high-level mathematics and problem solving.

With your support, 315 participants received scholarships to attend Mathworks summer programs.

Thank you for your dedication to developing the STEM leaders of tomorrow!

Your donation provided all this...

- Room
- Board
- Quality Teaching
- Technology
- Guest Speakers



So all this could happen...

- Teamwork Training
- Leadership Skills
- Problem Solving
- Innovative Ideas
- Research Projects



The Meadows Foundation



Kodosky Foundation



SID W. RICHARDSON FOUNDATION



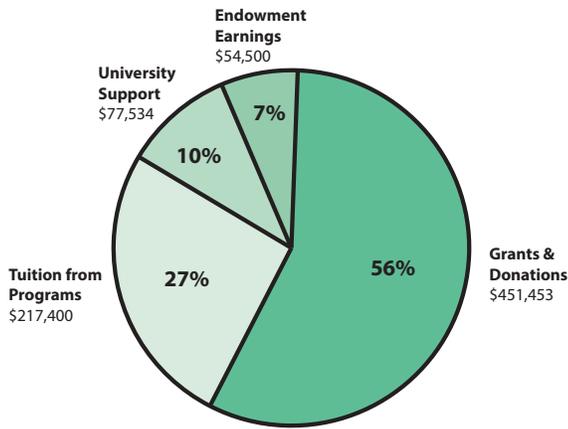
"My daughter really enjoyed camp last year, and it's really benefitted her. She went from being a 'C' student to a low 'A' student, getting 90s and 91s in math. Her brother saw how much she enjoyed it last year, and is really excited to go this year!"

- Parent of a student in the 2015 JSMC program

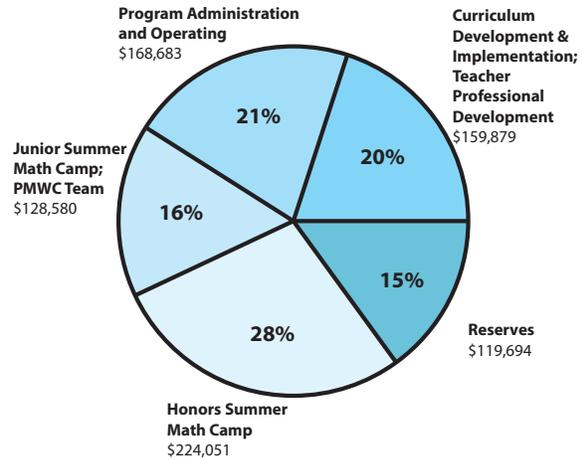
Financials

FY 2015

Total Operational Revenue: \$800,887

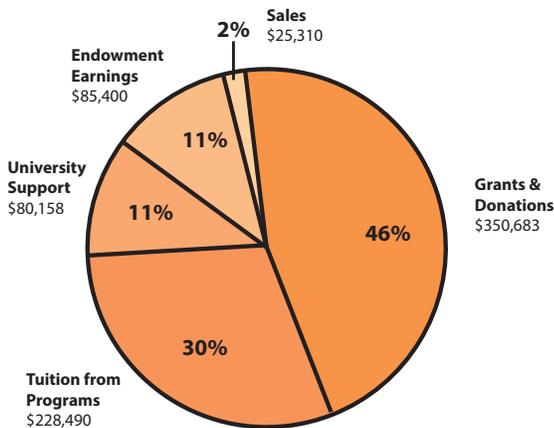


Total Operational Expenses: \$800,887

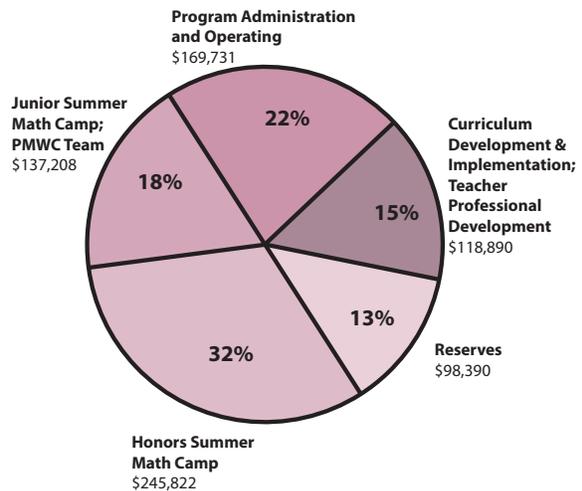


FY 2016

Total Operational Revenue: \$770,041

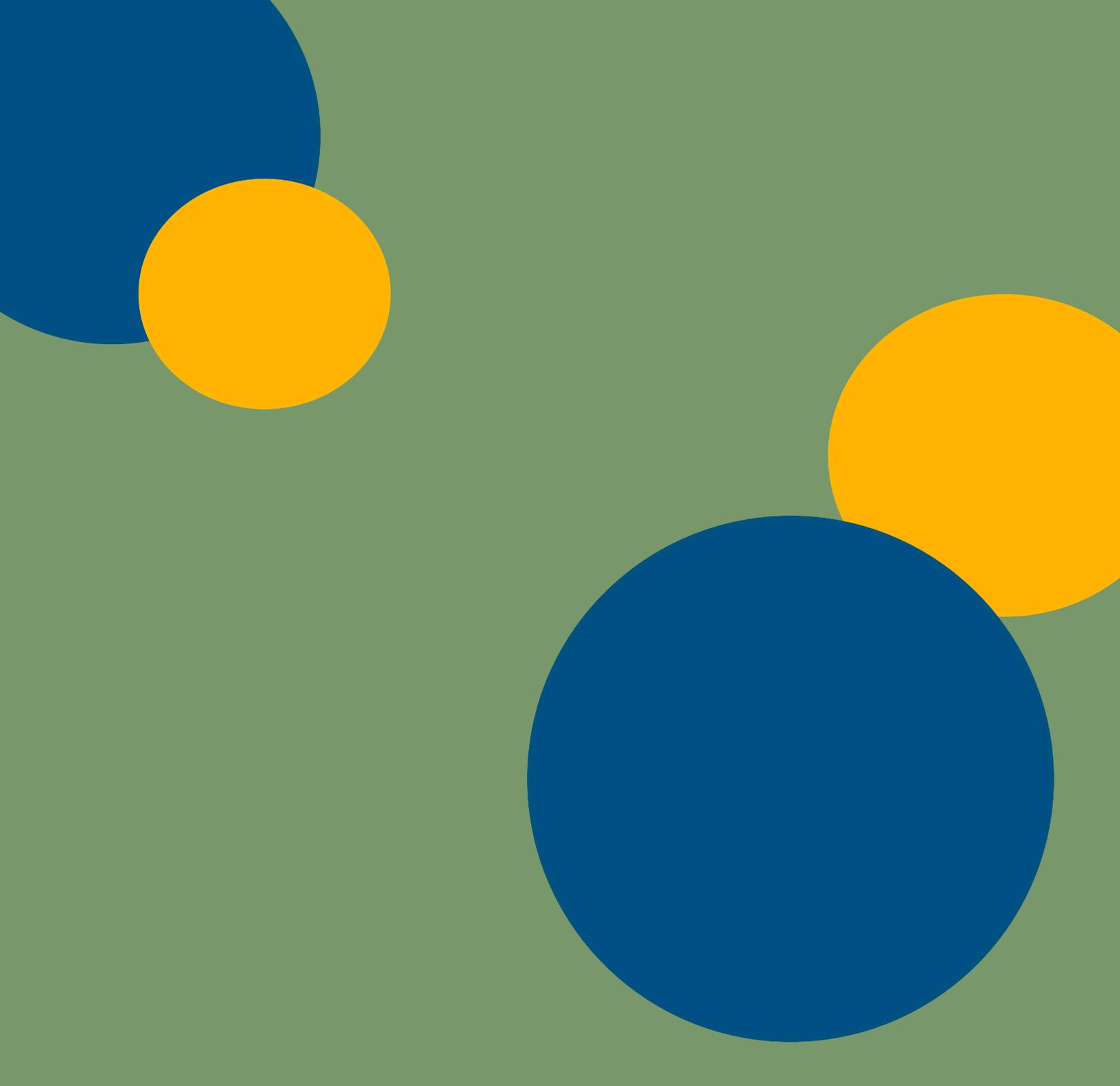


Total Operational Expenses: \$770,041



Mathworks has been providing high-quality programs for 28 years! A key to our success can be traced to ideas in a beautiful book by Jim Collins, *Good to Great in the Social Sectors*. In this, the author describes a hedgehog concept common to all great programs. There is a laser focus on 3 connected ideas—What are you passionate about, What can you be the best in the world at, and How does this connect to your economic engine.

We are passionate about engaging young students in doing mathematics at a high level. We believe that we can offer model programs that will inspire a future generation of leaders, and that our programs can be the best anywhere. Our economic engine consists of our alumni, friends, and people we have inspired through the years. You are all a part of our success, and we are proud to have developed a community of passionate, concerned students and teachers who want to give back to future generations. We may be a small group, but as Margaret Meade said, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed it is the only thing that ever has."



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.

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