



OKLAHOMA SCHOOL OF SCIENCE & MATHEMATICS FOUNDATION

**QUANTUM  
EXPERIENCE**

**CELEBRATING THE TRANSFORMATION  
OF STUDENT LIVES THROUGH  
ADVANCED ACADEMICS**

Benefiting the OSSM Faculty Endowment

**TUESDAY, MARCH 26, 2019**

**OSSM CAMPUS**

1141 N. Lincoln Boulevard, Oklahoma City

**HONORING  
“AWESOME” OSSM ALUMS**

**Bryan Eastin**, Ph.D.  
Theoretical Quantum Physicist  
Northrop Grumman  
OSSM Class of 1997 (Collinsville H.S.)

**Latisha Camp Heinlen**, M.D., Ph.D.  
Rheumatology and Internal Medicine  
OSSM Class of 1999 (Laverne H.S.)

**Rebecca Porter**, B.S.  
Structural Payload and Design Engineer  
The Boeing Company  
OSSM Class of 2005 (Putnam City North H.S., OKC)

**Marty Scantlen**, D.D.S.  
General Dentist  
Chickasaw Nation Department of Health, Purcell  
OSSM Class of 1997 (Thackerville H.S.)

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**KEYNOTE SPEAKER**

**Shelly Finley**, M.S.  
Deputy Project Manager, GeoCarb Project  
University of Oklahoma  
OSSM Class of 1993 (Dover H.S.)

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**INTRODUCTIONS AND REMARKS BY**

**Mrs. Sara Brown**, Chairman, OSSM Foundation

**Mr. Dan Little**, Chairman, OSSM

**Dr. Frank Y. H. Wang**, President, OSSM

**Mr. Scott Meacham**, President & CEO, i2E Inc.

**WELCOME & INTRODUCTIONS**

**Sara Brown**  
Chairman, OSSM Foundation

**INVOCATION**

**Rev. Sara Marie Bodenstein**  
Professor of Mathematics, OSSM (OSSM Class of 1994)

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**DINNER**

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**“AWESOME” ALUMNI HIGHLIGHTS**

**Scott Meacham**, President & CEO, i2E Inc.  
Master of Ceremonies

**KEYNOTE ADDRESS**

**Shelly Finley**, M.S.  
“GeoCarb mission: Science from the bottom of the earth to space”

**GIFT PRESENTATIONS**

**Dan Little**, Chairman, OSSM

**SPECIAL PRESENTATION**

**Mr. Little**

**BUILDING THE FUTURE**

**Frank Y. H. Wang**, Ph.D., President, OSSM

**CLOSING**

**Mr. Meacham**

## **BRYAN EASTIN, PH.D.**

**Theoretical Quantum Physicist  
Northrop Grumman Corporation  
OSSM Class of 1997 (Collinsville H.S.)**



B.S. Physics, California Institute of Technology, 2001  
Ph.D. in Physics, University of New Mexico, 2007  
(Dissertation Work in Quantum Error Correction)

- 2007-2009 NRC Postdoctoral Fellow at National Institute of Standards and Technology (NIST) Boulder
- 2009-2010 NIST Boulder Postdoc
- 2010-present Physicist at Northrop Grumman Corporation

Dr. Eastin studies quantum computation at Northrop Grumman Corporation where he leads a small team of theoretical physicists. Their work focuses on fault-tolerant quantum error correction, magic-state distillation, and related topics. This theoretical work is part of Northrop Grumman's larger effort in superconducting quantum devices and superconducting electronics. Dr. Eastin is best known in academia for the Eastin-Knill Theorem, which states that a non-trivial quantum code cannot have a universal, transversal, unitary gate set.

## **LATISHA HEINLEN, M.D. PH.D.**

**Rheumatology & Internal Medicine  
OSSM Class of 1999 (Laverne H.S.)**



B.S. Microbiology, University of Oklahoma  
M.D./Ph.D. OU College of Medicine

Latisha Heinlen grew up on a ranch near Laverne, Oklahoma where her family still lives today. During her senior year at OSSM she met Dr. Judith James and Dr. John Harley through the OSSM mentorship program and continued to work in their research labs after graduation and during her undergraduate training at the University of Oklahoma. Latisha attended medical school and graduate school at the University of Oklahoma and received her M.D. and Ph.D. in Pathology with Dr. James as her mentor. After graduation she completed Internal Medicine residency and fellowship in Rheumatology. In 2017, Latisha opened her own practice, Rheumatology Associates of Oklahoma, where she now practices rheumatology. In addition to running a busy rheumatology practice, Latisha has three girls ages 6, 10 and 14 and one husband, Jonathan Heinlen, who is also a practicing physician in Oklahoma City. They enjoy traveling whenever possible and weekends full of soccer games.

## **REBECCA PORTER, B.S.**

**Project Lead & Design Engineer, Boeing Defense  
OSSM Class of 2005 (Putnam City West H.S.)**



B.S. Mechanical Engineering,  
University of Texas in Tyler

Born and raised in central Oklahoma, Rebecca currently resides in Edmond and works for The Boeing Company in OKC as a Design Engineer and Project Lead supporting the modernization of the Airborne Warning and Control System (AWACS) platform. As a young girl, Rebecca never dreamed of being an Engineer when she "grew-up." Coming from a humble background she never knew it was even a possibility. The exposure to advanced math and science courses, culture and arts, as well as volunteer work at OSSM significantly impacted her future for the better. Today, she is passionate about being an Engineer and is forever grateful to the role that the OSSM experience played in shaping her life. Rebecca enjoys traveling with her partner Jeff, caring for their two perfect pups, attending classical music concerts, promoting STEAM education and various other non-profit works. Presently, she serves as Secretary for the Oklahoma Virtuosi Chamber Orchestra Board.

## **MARTY SCANTLEN, D.D.S.**

**General Dentist  
Chickasaw Nation Department of Health, Purcell  
OSSM Class of 1997 (Thackerville H.S.)**



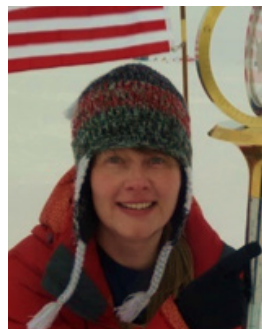
B.A. History, University of Oklahoma  
D.D.S. OU Health Sciences Center

Growing up, Marty Scantlen dreamed of doing something in the medical field, so she always pursued math and science in school. A member of the Kiowa Tribe of Oklahoma herself, she now serves Native people daily in her work, which has been one of her life goals. Marty volunteers each year with the Oklahoma Mission of Mercy free dental clinic and is an amateur balloon artist. She often volunteers making balloon animals at children's events. Marty lives in Norman with her husband Andrew and their two sons, Isaac and Miles. In her spare time, she enjoys musical theater and learning new trivia, in hopes of one day being a contestant on Jeopardy.

## KEYNOTE SPEAKER

### SHELLY M. FINLEY, M.S.

Deputy Project Manager, GeoCarb,  
University of Oklahoma  
OSSM Class of 1993 (Dover H.S.)



B.S. Physics-Space Science (Chemistry & Math Minors),  
Northwestern State University of Louisiana, 1999  
M.S. Physics (Chemical Engineering Minor),  
University of Louisiana at Lafayette, 2001

In 2006, the 1998 HC96 Asteroid was renamed 22586 Shellyhynes for Shelly's work mentoring an Intel Science Talent Search Finalist. After teaching Astronomy and Physics for a decade at the Louisiana School for Math, Science and the Arts, Shelly was awarded the Albert Einstein Distinguished Educator Fellowship in 2011-2012 with the NSF Office of Polar Programs.

In 2012, Shelly began serving as Science and Technical Project Services Supervisor at the Amundsen-Scott South Pole Station in Antarctica, providing technical support to all NSF-funded grantees researching the South Pole and supervised Research Associates in monitoring/troubleshooting Pole experiments during the Austral winters. Additionally, Shelly served as the Winter Site Manager managing the Station for 13 months during the 2013-2014 Austral Winter Season before continuing her S&TPS Supervisor position.

In October 2017 Shelly accepted a position at the University of Oklahoma as the Deputy Project Manager of the Geostationary Carbon Cycle Observatory (GeoCarb), a NASA-funded project and the largest contract awarded to OU in its history. GeoCarb is a complete mission to build a carbon cycle observatory and place it on a commercial satellite in geostationary orbit. Data collected by GeoCarb will provide carbon dioxide, carbon monoxide, and methane concentrations and fluxes with unprecedented precision.

Shelly is a founding member of The Mars Society (along with Buzz Aldrin and James Cameron). She had the unique opportunity to meet Buzz Aldrin at the South Pole in 2016.



### JARICA WALSH

#### Oklahoma Artist

These ceramic sculptures are inspired by a night sky and Carl Sagan's teachings. We are all made of star stuff, and we are all powerfully connected. The artworks are infused with positive energy and goodwill.

Each piece is hand-built and individual, formed from English Porcelain clay and kiln fired. Every letter is hand-carved, favoring a personal touch over uniformity. Each award has a unique pattern, and a slightly different shape or size - a mini-constellation.

## OKLAHOMA SCHOOL of SCIENCE and MATHEMATICS

### MATH

Pre-Calculus I, II & III; Calculus I & II; Multivariate Calculus; Differential Equations; Number Theory; Probability & Statistics; Linear Algebra; Abstract Algebra; Geometries; Topology; Real Analysis; Complex Analysis; Advanced Problem Solving; Foundations of Mathematics; Special Topics in Math

### BIOLOGY

General Biology; General Zoology; Vertebrate/Invertebrate Zoology; Embryology; Anatomy & Physiology; Endocrinology; Histology; Genetics; Intro to Neuroscience; Plant & Soil Science; Biochemistry; Botany; Microbiology; Ecology; Molecular & Cellular Biology

### CHEMISTRY

General Chemistry I & II; Organic Chemistry I & II; Biochemistry; Chemical Thermodynamics; Physical Chemistry, Chemistry Olympiad Prep/Directed Study

### ENGINEERING

Engineering Seminar, Robotics Engineering, Electronic Circuits, TEAM+S Competition (extracurricular)

### PHYSICS

General Physics; Mechanics; Electricity & Magnetism; Thermal Physics Waves & Optics; Intro to Modern Physics; Modern Physics II; Astronomy; Topics in Theoretical Physics

### COMPUTER

Intro to Computer Science; Object-Oriented Programming with Java; Data Science Structures I & II; Operating Systems; Networking; Computer Architecture & Assembly Programming; Special Topics

### HUMANITIES

American Literature; World Literature; Principles of English Composition; American History; Western Civilization I & II; East Asian History; Arab Civilization; Special Topics; Foreign Languages; Fine Arts

### FINE ARTS

Robust program sponsored privately by the Kirkpatrick Foundation

### PHYSICAL EDUCATION

### FOREIGN LANGUAGES

German, French, Spanish, Japanese, Chinese & Latin

### MENTORSHIPS

In any given year, approximately half of OSSM seniors are engaged in mentorships with community professionals in their areas of special interest, such as bioscience research, engineering, etc.

# OKLAHOMA SCHOOL of SCIENCE and MATHEMATICS

**Eighty-five percent of OSSM alumni are remaining in scientific, technology, engineering, and mathematics (STEM) fields for their careers!**

The fields of study and careers most chosen by OSSM graduates are **engineering** (aerospace, biomedical, chemical, civil, computer, electrical, mechanical, petroleum); **medicine, medical research, and other health sciences; and other fields including computer science, technology, education, scientific research, business, and law.**

OSSM alums are employed in many of Oklahoma's finest corporations, hospitals and technical firms such as AT&T, Artificial Lift Company, Baptist Hospital, Benham Companies, Boeing, Chesapeake Energy, C. H. Guernsey, Cardinal Engineering, Chevron Phillips, Devon Energy, Ditch Witch, Dobson Communications, FAA, Hall Estill, LexisNexis, Mercy Hospital, MidFirst Bank, OG&E, Oklahoma Cardiovascular Associates, Oklahoma Center for Neuroscience, Oklahoma Heart Hospital, Oklahoma Medical Research Foundation, Oklahoma State Bureau of Investigation, SAIC, St. John Hospital, Standard Aero, Stillwater Medical Center, Tinker Air Force Base, University of Oklahoma and OU College of Medicine, University of Tulsa, World Telemetry, and many more.

A full fourth of Tulsa's most successful start-up companies highlighted by the Tulsa World in 2012 were begun by OSSM alumni.

OSSM students are actively recruited by the finest universities, colleges and technical institutes from across the states; however, more than half choose to pursue their higher education in Oklahoma.



With just 28 classes graduated and some 60% of OSSM alumni living/working in Oklahoma, **OSSM and its alumni/alumnae are already stimulating some \$40 million each year in economic activity in Oklahoma** and this impact is increasing with every graduating class!

## HONORARY CHAIR

The Sarkeys Foundation

## EVENT COMMITTEE

<b>Jerry Burger</b> , Committee Chair	Joan Frates
<b>Sara Brown</b> , QE Event Chair	Sue Ann Hyde
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Elizabeth Farabee	Linda Rodgers
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Dr. Bryan Eastin (OSSM Class of 1997)

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Mary Spencer



## **\$1,000 - MAGNETIC FIELD**

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## **\$500 - SPINNING ELECTRON**



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## **MANY THANKS TO OUR ADDITIONAL MAJOR 2018-2019 PARTNERS!**

- The Boeing Company – OSSM Regional Center Programs
- H.A. and Mary K. Chapman Charitable Trust – General Operating
- ConocoPhillips & Phillips 66 – 22 years helping train Oklahoma middle school science teachers through OSSM's Summer Science Teachers' Institute
- Inasmuch Foundation – Helping OSSM retain its outstanding, largely Ph.D. faculty
- Kirkpatrick Foundation – Underwriting OSSM's robust Fine Arts program
- Samuel Roberts Noble Foundation – Helping OSSM retain its outstanding faculty
- OGE Energy – Fully sponsoring a faculty position
- OSSM Parents Association – Providing a variety of enrichment activities for all current OSSM students
- Sarkeys Foundation – Helping train Oklahoma middle school math teachers through OSSM's Summer Math Teachers' Institute
- Simmons Foundation – Curriculum
- Troelstra Family – Student Scholarship Endowment

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# QUANTUM EXPERIENCE