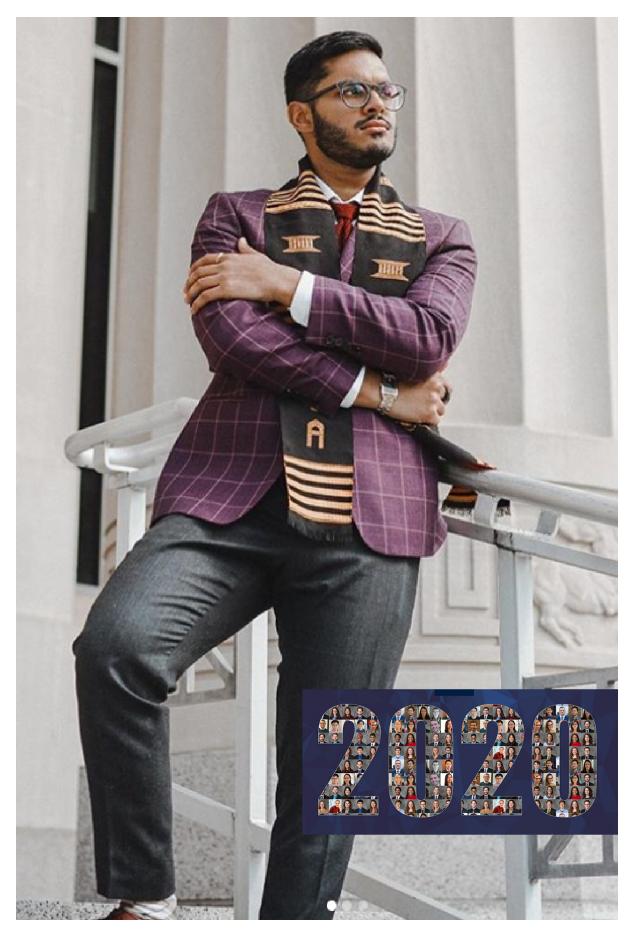


## **Springing into learning**

As the virtual graduation confetti slowly floats down and the stress of exam week dissipates, we wanted to devote this issue of *MSE QuaranTEAM* to continued learning by giving you all the answers to the past three MSE Trivia Quizzes. We bet you'll learn something new - but in a more relaxed kind of way. Oh, and there are now four new Nerd Nite presentations to view, a.k.a. Must-See MSE!



MSE Class of 2020 graduate Nabeel Khan poses on the steps of Mason Hall on April 20 in his Alpha Phi Alpha stole. If you have a graduation photo to share, please send it to <a href="mailto:krisfres@umich.edu">krisfres@umich.edu</a>.

### Chair's Message: Pursuit of Knowledge

We have completed a historic Winter term and an unprecedented graduation for the class of 2020. I thank all the alumni, staff, faculty and students who were united to cheer for our May 2020 graduates!

Spring and summer months are time for enjoying the warm weather and long sunny days, and a break from the daily routine of classes, homework assignments and exams. In academia it is also the season fully dedicated to scholarly research and



professional development. In this unusual Spring, we are challenged to continue our scholarly pursuits without being able to access our experimental labs.

Many of our scholars currently on campus either possess or are pursuing a doctoral degree, that is the highest level of academic degree a person can achieve for completing an original thesis offering a significant new contribution to knowledge in their subject. The current time away from the routine of experimental data collection enables us to focus on self-learning and deepen our commitment to the pursuit of knowledge.

Through continued self-learning, we can grow intellectually and spiritually, and have inner wisdom and capacity for self-exploration to understand the real. Devotion to knowledge is a positive way to persuade the mind to leave its low temptations. A mind, thus awakened to the serene joys of the self, will make us better human being.

Stay Well! Amit **Deja vu** - Assistant Professor Liang Qi also graduated during a pandemic - during the 2003 SARS outbreak in China. Below was his video message to the Class of 2020.



Congratulations to all 2020 graduates! The current situation reminds my college graduation in Beijing in 2003; an epidemic of SARS made all students isolated inside the campus for several months, and all the graduation ceremonies were canceled. We, as either individuals or a whole society, always meet all kinds of difficulties from time to time, but we can and will overcome them by science, technologies, and our humble hearts to serve others. I believe those are what you have learned in the last four years. So embrace your future adventure fearlessly and Go Blue!

# MSE Trivia Answers

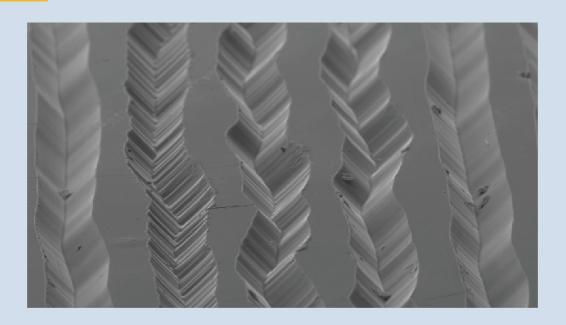
Thanks to everyone who participated in our three weeks of trivia quizzes. Over the course of the contest we had a total of 53 entries. Five people got all the answers correct on Quiz #1, four on Quiz #2 and three on Quiz #3. Those 12 names were then entered into a random drawing for an Amazon gift card. And the winner of the drawing is....Ph.D. candidate **Peter Meisenheimer!** Congratulations, Peter!

The answers to all three quizzes are below.

# Quiz #1

What is this object?

**Answer: A vinyl record** 



MSE History: What was the year of discovery of the "secret ingredient" element in Pyrex that gives it great resistance to thermal shock?

Answer: 1808 (boron)

#3

**U-M History: Legend has it that young couples** kissing under this structure are destined to marry. What year was it built?

**Answer: 1902 (The structure is the Denison** archway a.k.a., West Engineering Arch.

Note: A lot of people got tripped up by this one, answering 1904, which was the year the building

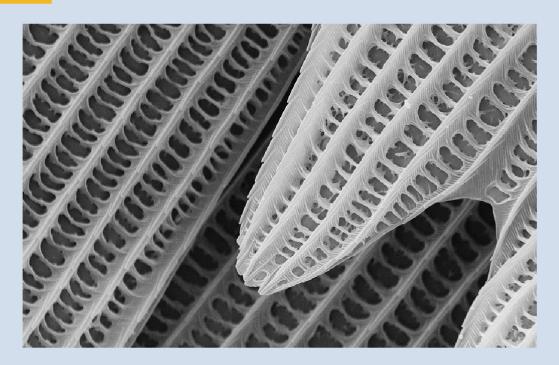
opened, but we gave it you.:-))

## Quiz #2

#1

#### What is this object?

**Answer: A butterfly wing** 



#2

MSE History: What element was used to create the first solar cell?

Answer: Selenium (in 1877 or 1883, depending on who you ask)

#3

U-M History: What building is now located at the original home field of the Michigan Wolverines football team?

**Answer: Schembechler Hall** 

#1

In 1973, she became the first woman to receive a Ph.D. from U-M in metallurgy/materials engineering. Her research focused on electron microscopy studies of dental materials.

**Answer: Anne Rowe** (PHD '73)



Throughout her impressive career, Anne Rowe successfully blended academic and professional pursuits. In addition to her practical experience as a materials engineer, she was an esteemed educator, teaching college level courses in engineering materials, corrosion, fracture

mechanics, and chemistry. A past president of the Society of Women Engineers, Dr. Rowe actively promoted women in science and engineering all her life. Rowe worked as a research metallurgist/materials engineer on NASA space shuttles at both the Lewis Research Center and Kennedy Space Center. In 1981 she received the NASA Group Achievement Award for the STS-1 Launch Support Team. Following her NASA career, she taught at Purdue, the Florida Institute of Technology, and LaRoche College in Pittsburgh.

#2

She is the first woman in U.S. history to lead the Department of Energy's Office of Nuclear Energy. Who is she?

Answer: Dr. Rita Baranwal (MSE '96, PHD '98)



Dr. Rita Baranwal was appointed Assistant Secretary of Nuclear Energy at the DOE on June 20, 2019. Before her appointment, Baranwal worked for Idaho National Laboratory's (INL) Nuclear Science & Technology directorate as the director of the Gateway for Accelerated

Innovation in Nuclear (GAIN) initiative, where she was responsible for providing the nuclear industry and other stakeholders access to DOE's state-of-the-art research, development (R&D) expertise, capabilities, and infrastructure to achieve faster and cost-effective

development, demonstration, and ultimate deployment of innovative nuclear energy technologies.



# Based on his generous endowment, a Michigan Engineering building on North Campus is named after him. Who is he?

**Answer: Vincent Gorguze (BSE '41)** 



At its May 19, 2011 meeting, the U-M board of regents authorized naming the College of Engineering's Engineering Programs Building as the Gorguze Family Laboratory. Gorguze worked for Ford Motor Co. and Curtiss-Wright Corp. before joining Emerson Electric in 1963,

eventually becoming president and chief operating officer. Gorguze retired from Emerson Electric in 1978, but that same year he co-founded Cameron Holdings Corp., which has a long and successful track record of acquiring, operating and growing a variety of companies in North America, Europe and Australia, and has made over 37 acquisitions with an aggregate transaction value in excess of \$1 billion.



## A well-known diffusion phenomenon is named after him. Who is he?

Answer: Ernest O. Kirkendall (MSE '35, PHD '38)



While an assistant professor of metallurgical engineering at Wayne State University (1941-46), Dr. Ernest Kirkendall co-authored a paper that would become famous among physical metallurgists and solid-state physicists: "Zinc Diffusion in Alpha Brass." This research led to the discovery

that the then-believed atomic mechanism of atomic diffusion in the solid state was wrong. In the decades since, the "Kirkendall Effect" has become a cornerstone of materials science; critical to welding, metal alloying, thin film production and any other process where two different metals are joined together.

Kirkendall joined the American Iron and Steel Institute (AISI) as a metallurgical engineer in 1965. He retired from his position as vice president of manufacturing and research at AISI in 1979.



## He served as the 12<sup>th</sup> director of the National Science Foundation (NSF). Who is he?

Answer: Arden L. Bement, Jr. (PHD '54)



Dr. Arden Bement served as NSF director for six years, from 2004-2010.

Bement's diverse career spanned industry, government and academia. In 1954, Bement launched his career in industry as a senior research associate at General

Electric. In 1965, Bement became manager of fuels, materials, and metallurgy at Battelle Northwest Laboratories. In 1970, he left Battelle to take a position at MIT as professor of nuclear materials. In 1976, Bement brought his multifaceted engineering experience to the federal government as director of the Office of Materials Science for the Defense Advanced Research Projects Agency (DARPA). From 1979 to 1980, he served as deputy undersecretary for research and engineering for the DOE.

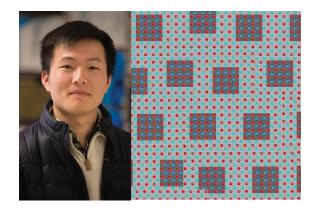
In 1992, Bement returned to academia to assume the position of David A. Ross Distinguished Professor of Nuclear Engineering at Purdue University.

In 2001, Bement returned to government when President George W. Bush appointed him as director of the National Institute of Standards and Technology (NIST). As director of NIST, Bement led organizational efforts to promote innovation and industrial competitiveness within the U.S.

#### Virtual Events

#### Ruiming Lu PhD defense

A member of the Poudeu group, Ruiming Lu will present "Novel Composite Strategy to Optimize Thermoelectric Performance"



on May 12, 10 a.m.-noon. To join in: https://umich.bluejeans.com/1385729503 **Read abstract**.

#### **Nerd Nite Presentations**

Watch Ben Derby ("Gyroscopic Procession...Or Why Motorcycles are Really Cool,"), Paul Chao (art of Kombucha making), Brian lezzi (Syllabary written languages) and Evan Raeker (knife sharpening). Watch Ben and Paul. Watch Brian and Evan.



## Stay in the Loop



With the Winter term behind us, people are starting to wonder what the fall will look like. Will there be online classes? Students living in dorms? Football games? Stay up to date on the latest developments as that picture starts to come into focus: Click here for the CoE student resources site and here for the U-M coronavirus update site.

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