

## MathWorks is a proud sponsor of the MIT Science Trivia Challenge and wishes the teams good luck!

1
MathWorks
Accelerating the pace of engineering and science


## SCience trivia challengej



Thursday, April 19, 2018 Kirsch Auditorium, MIT

Sponsored By:

(\%eb.mit.edu/trivia
ff facebook.com/MITtrivia
3 @MITtrivia Live Tweet using \#MITtrivia18

## High School Division - Round A

Heisenberg's Certainty Principles
Fish
Empress Iris' Regime
CRLS Science Falcons
Fig Neutrons
Brookline High School
Montrose Rare Metals
The Sly Shrews
Scarlet Knights

## High School Division - Round B

The Molympians
Fish 1
*Insert Bad Science Pun*
CRLS Silver and Black
Undecided
Fermi Answers
Warriors
The Shrew's Berries

## Middle School Division

Smarticle Particles
STEM Raiders
Science Guys
Curious Keen
ScienceForFun
Nano Know-It-Alls
Clarke Barkers
$E^{2}=\left(m c^{2}\right)^{2}+(p c)^{2}$
Asteroids

King Philip Regional High Schoo

Newton South High School 2
Newton North High School 3
Cambridge Rindge and Latin School 4
Algonquin 5
Brookline High School 6
Montrose School 7
Shrewsbury High School 8
North Andover High School 9

## Table

King Philip Regional High School 1
Newton South High School 2
Newton North High School 3
Cambridge Rindge and Latin School 4
Algonquin 5
Acton Boxborough 6
Andover High School 7
Shrewsbury High School 8

## Table

King Philip Middle School 1
Pennichuck Middle School 2
Madeline English School, Everett, MA 3
Curious Science \& Learning - Chelmsford 4
ScienceForFun 5
King Philip Middle School 6
Clarke Middle School, Lexington 7
Franklin 8
Nahsua, NH 9

## General Rules

- This competition is for fun, so play fair!
- No outside references are allowed, including books, cheat sheets, informative t-shirts, computers, handheld devices, etc. Pencils, pens and blank paper are allowed and are provided.
- Team members may confer within their team on each question, but neither team members nor audience members are allowed to shout out answers or offer any other distractions while teams are considering questions.


## SCIENCE TRIVIA CHALLENGE

## Thanks to all of our volunteers!

COMMITTEE MEMBERS \& VOLUNTEERS: Bob Ferrara (MIT '67), Co-Chair; John McGoldrick (MIT '73), Co-Chair; Alisha Weight (MIT '13), Co-Chair; Bonny Kellermann (MIT '72), Co-Chair; Meghan Jendrysik (MIT '97), Co-Chair; Jesse Benck, Catherine Cooper (MIT ‘00), Chris Dippel (MIT '75), Orville Dodson (MIT '68), Richard Dower (MIT '67), Briana Dunn, Ngozi Eze (MIT '05), Richard Jendrysik, Andre Kelly (MIT '00), Diane Korelitz, Ted Korelitz (MIT '56), Jennifer Lam, Peg LeGendre, Jeremy Li, Jacky McGoldrick, Chris Santos (MIT '74), Brian Saper, Karen Seo (MIT '75), Flora Su (MIT '18), Ivan Sysoev (MIT '10)

QUESTION CONTRIBUTORS: Chris Dippel* (MIT '75), Ngozi Eze* (MIT '05), Jacky McGoldrick, John McGoldrick* (MIT '73), Alex Rosen (MIT '94), Chris Santos* (MIT '74), Megan Snyder*, Alisha Weight* (MIT '13)
*These contributors also served as question editors.

> Interested in helping next year? Do you have questions to contribute?

> Contact us at:
> sciencetrivia@mit.edu
> or web.mit.edu/trivia

## Like us on Facebook to see/add photos from tonight at http://www.facebook.com/MITtrivia

Everyone here is a winner. Thank you for participating! All participants receive a certificate of participation and a pen from Mathworks, a bag and bracelet from the Cambridge Science Festival, a coloring book from Cell Press, and one free pass each to: the Museum of Science, the Discovery Museum of Acton, MA, and the MIT Museum. The Middle School Runner-Up team members will each receive a MIT sweatshirt from the MIT Coop. The High School Silver Runner-Up team members will each receive two additional passes to all three sponsoring museums, and a USB bracelet from the Cambridge Science Festival. The High School Gold Runner-Up team members will each receive a MIT sweatshirt from the MIT Coop. The Middle School, High School Gold, and High School Silver winning teams will each have lunch or dinner with one of our Nobel Laureates.

## Thank you to our Nobel Laureates!


H. Robert Horvitz, MIT Professor of Biology

2002 Nobel Prize Winner "For discoveries concerning genetic
regulation of organ development and programmed cell death"

Wolfgang Ketterle, MIT Professor of Physics
2001 Nobel Prize Winner "For the achievement of Bose-Einstein condensation in dilute gases of alkali atoms, and for early fundamental studies of the properties of the condensates"

Richard R. Schrock, MIT Professor of Chemistry
2005 Nobel Prize Winner "For the development of the metathesis method in organic synthesis"

SCIENCE TBIVIA CHALLENGE!

5:00 PM - 6:00 PM Registration \& Meet the Scientists<br>6:00 PM-6:05 PM Welcome<br>6:05 PM - 6:25 PM High School Round A<br>6:25 PM - 6:45 PM High School Round B<br>6:45 PM-7:00 PM Intermission<br>7:00PM - 7:05 PM A Word from our Sponsor, Mathworks<br>7:05 PM - 7:45 PM Middle School Round<br>7:45 PM - 8:00 PM Intermission<br>8:00 PM - 8:20 PM<br>High School Silver Final Round<br>8:20 PM - 8:40 PM<br>High School Gold Final Round<br>8:40 PM - 9:00 PM Awards Ceremony

Thank you to our Prize Sponsors!
Museum of Science, Boston, MA
Discovery Museum of Acton

## MIT Museum

MIT COOP
Cambridge Science Festival
Cell Press

## Our Moderator

## Michael Short

Prof. Michael Short joined the faculty in the Department of Nuclear Science and Engineering in July, 2013, just the latest stop in what can be described as a lifetime in/around MIT. He was born in Brookline, grew up in Swampscott, and started coming to MIT in high school on weekends for the HSSP enrichment program. He signed on as an undergraduate researcher (UROP) in nuclear materials, and never left either the field or the school. Now, as an assistant professor, he studies and teaches about the nature and effects of radiation damage on materials for nuclear energy. He also teaches the Introduction to Nuclear Physics course, where this year students burned 1,000 bananas to concentrate the Potassium-40 (a naturally occurring radioactive isotope), and measured their radioactivity at the MIT nuclear reactor laboratory.

"Interdisciplinary work is where the fun stuff is; it's where you get to work on challenges that many people consider too difficult, or that require a broader perspective."

Meet the Scientists



## Jesse Benck

Post-doctoral Associate
Chiang Lab, Department of Materials Science and Engineering, MIT
Rick Dower
Science Chairman Emeritus
Roxbury Latin School

## Briana Dunn

Post-doctoral Associate
Belcher Lab, Department of Biological
Engineering, MIT

## Ngozi Eze

Research Specialist
Belcher Lab, Koch Institute for Integrative Cancer Research

## Jeremy Li

Post-doctoral Fellow
Belcher Lab, Koch Institute for Integrative Cancer Research

## Flora Su

Recent Graduate
Heald Lab, Department of Civil and
Environmental Engineering, MIT

## Ivan Sysoev

PhD Student
Lab for Social Machines, Media Lab, MIT

