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

> We support programs that inspire learning and advance education in engineering, science, and math. Our strong commitment to education comes from believing in the power of learning and the ability of engineering, science, and math to find innovative solutions to real-world problems.



SCIENCE TRIVIA CHALLENGE!



Wednesday, April 22, 2015 5:00 PM Broad Institute of MIT & Harvard

## @MITtrivia Live Tweet using #MITtrivia15

Sponsored By



High School Division - Round A		Table
Abs Like Diamond	Newton North High School	1
The Montrose Rare Metals	Montrose School	2
Fish 1	Newton South High School	3
KP1	King Phillip Regional High School	4
Groton School	Groton School	5
Carrying Capacity	Quabbin Regional High School	6
STEAM Crew	BCYF Menino Community Center	7
The Procrastinators	North Andover High School	8
High School Division - Round B		
Abs Like Talc	Newton North High School	1
The Montrose Natural Selections	Montrose School	2
KP2	King Philip Regional High School	3
The Evo/Divas	Nazareth Academy	4
Grover Clevelands	Melrose High School	5
Dover-Sherborn Raiders	Dover-Sherborn High School	6
GDRS	Groton Dunstable High School	7
The O'Bryant Tigers	John D. O'Bryant School of	8
	Mathematics & Science	
Middle School Division		
Smarticle Particles	King Philip Regional Middle School	1
Trivianaughts	North Andover Middle School	2
Super Novas	Doherty Middle School	3
Curious Keen	Curious Science & Learning	4
Acton STEM	R.J. Grey Junior High School	5
Westies	West Middle School	6
Bulldogs	Madeline English School	7
Jonas Clarke Middle School	Jonas Clarke Middle School	8

**General Rules** 

- This competition is for fun, so NO CHEATING!
- 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 Committee**

COMMITTEE MEMBERS & VOLUNTEERS: Bob Ferrara (MIT '67), Co-Chair; John McGoldrick (MIT '73), Co-Chair; Alisha Weight (PhD '13), Co-Chair; Bonny Kellermann (MIT '72), Co-Chair; Adrienne Baker (MIT '81), Brian Bronk (PhD '95), Dianne Bronk, Karl Critz (MIT '96, SM '97, SM '12), Chris Dippel (MIT '75), Orville Dodson (MIT '68), Johanna Dwyer (MIT MBA '97), Ngozi Eze (MIT '05), Stephen Friedenthal (MIT '92, SM '06), Rachel Gesserman, Meghan Jendrysik (MIT '97), Andre Kelly (MIT '00), Jacky McGoldrick, Jennifer Lam, Peg LeGendre, Robert Majovski, Dennis Rivera (MIT '99, MBA '09), Chris Santos (MIT '74), Jean Santos, Brian Saper, Bob Schwartz (MIT '58), Johanna Westcott

QUESTION CONTRIBUTORS: Amanda Bonificio (MIT '09, '10), Chris Dippel\* (MIT '75), Bob Karash, Jacky McGoldrick, John McGoldrick\* (MIT '73), Jeff Roberts\* (MIT '02), Alex Rosen\* (MIT '94), Chris Santos, James Tanton, Alisha Weight\* (MIT '13), Women@Broad Working Group \* 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

## Teams, audience, and volunteers please complete our survey by May 1 at <a href="http://bit.ly/triviasurvey">http://bit.ly/triviasurvey</a>

Like us on Facebook to see/add photos from tonight at <u>http://www.facebook.com/MITTrivia</u>

### Prizes

Everyone here is a winner. Thank you for participating! **All participants** receive a Mathworks certificate of participation, a Cambridge Science Festival bag, a pass to the Museum of Science and The Discovery Museums of Acton, MA and a gift from Cell Press. The **Middle School Runner-Up** team members will each receive an MIT sweatshirt from the MIT Coop. **The High School Silver Runner-up** team members will each receive a T-shirt and a bag from the Broad Institute, and two extra tickets to the Discovery Museums of Acton, MA. The **High School Gold Runner-Up** team members will each receive an MIT sweatshirt from the MIT Coop. The **Middle School and High School Gold and High School Silver winning teams** will each dine with one of our Nobel Laureates.

### Thank you to our Nobel Laureates



Jerome Friedman, MIT Professor of Physics 1990 Nobel Prize Winner "For pioneering investigations concerning deep inelastic scattering of electrons on protons and bound neutrons, which have been of essential importance for the development of the quark model in particle physics"



**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 Royce Schrock,** MIT Professor of Chemistry 2005 Nobel Prize Winner "For the development of the metathesis method in organic synthesis"

Thank you to our Prize Sponsors Museum of Science, Boston, MA The Discovery Museums of Acton, MA The MIT COOP Cell Press Broad Institute



5:00 PM - 6:00 PM	Lobby Registration & Meet the Scientists
6:00 PM - 6:05 PM	Welcome
6:05 PM - 6:30 PM	High School Round A
6:30 PM - 6:55 PM	High School Round B
6:55 PM - 7:00 PM	Intermission
7:00 PM - 7:05 PM	A Word from our Sponsor, Mathworks
7:05 PM - 7:50 PM	Middle School Round
7:50 PM - 7:55 PM	Intermission
7:55 PM - 8:20 PM	High School Silver Final Round
8:20 PM - 8:45 PM	High School Gold Final Round
8:45 PM - 9:00 PM	Awards Ceremony

# Tell us what you think! Complete the STC survey by May 1 at <a href="http://bit.ly/triviasurvey">http://bit.ly/triviasurvey</a>





#### Meet the Scientists

Ashli Davis-Polanco Process Development Associate II Broad Technology Lab



**Diana Lu** Research Associate II Klarman Cell Observatory



**Emelia Failing** Process Development Associate Infinium Group, Genomics Platform



Angela Brooks, PhD Postdoctoral Fellow Meyerson Lab, Cancer Program



Kristen Connolly Senior Analytics Engineer Informatics Group, Genomics Platform



Sara Marlow Research Associate Garraway Lab, Cancer Program



#### **Our Moderator, Amos Winter**

Amos Winter is an Assistant Professor in the Department of Mechanical Engineering at MIT. He is the Director of the Global Engineering and Research (GEAR) Lab, which focuses on the marriage of mechanical design theory and user-centered product design to create simple, elegant technological solutions for use in highly constrained environments. His research interests include design for emerging markets and developing countries, biomimetic design, fluid/solid/granular mechanics, biomechanics, and the design of ocean systems.



Prof. Winter is the principal inventor of the Leveraged Freedom Chair (LFC), an all-terrain wheelchair designed for developing countries that was a winner of a 2010 R&D 100 award and was named one of the Wall Street Journal's top innovations in 2011. His Ph.D. work focused on adapting the burrowing mechanisms of razor clams to create compact, low power, and reversible burrowing systems for subsea applications such as anchoring, oil recovery, and cable installation. Prof. Winter is a founder of Global Research Innovation and Technology (GRIT). He was the recipient of the 2010 Tufts University Young Alumni Distinguished Achievement Award, the 2010 MIT School of Engineering Graduate Student Extraordinary Teaching and Mentoring Award, the 2012 ASME/Pi Tau Sigma Gold Medal, and was named one of the 35 Innovators Under 35 (TR35) by Technology Review