



# Physics & Engineering Festival

SATURDAY, APRIL 4, 2020: 10:00 am – 5:00 pm

## MAIN EVENTS

|                            |  |  |
|----------------------------|--|--|
| 10:00 am – 3:30 pm         | <b>Hands-On Science Exhibits</b>   | Mitchell Physics (MPHY), Mitchell Institute (MIST), and Blocker (BLOC) Buildings |
| 11:00 am                   | <b>Public Lecture - “Living &amp; Working in Space: Dream of a Lifetime”</b> by Astronaut Michael Fossum   | Hawking Auditorium (MIST MB01)   |
| 11:00 am, 1:00 pm, 2:30 pm | <b>Bubble Magic Show</b> by Tom Noddy  | Mitchell Physics Lecture Hall (MPHY 203, 204, and 205)                           |
| 2:00 pm                    | <b>Public Lecture - “Biomedical Challenges for Human Spaceflight”</b> by Astronaut Nancy Currie-Gregg      | Hawking Auditorium (MIST MB01)   |
| 3:30 pm                    | <b>5-Barrel Depth Charge Explosion</b>   | South Side of Mitchell Physics (MPHY) Building                                   |
| 4:00 pm                    | <b>Public Lecture - “How did Amy and Sheldon win their Nobel Prize?”</b> by CBS Consultant David Saltzberg | Mitchell Physics Lecture Hall (MPHY 203, 204, and 205)                           |

## SPECIAL EVENTS

|                                      |   |   |
|--------------------------------------|---|---|
| 10:00 am – 3:30 pm                   | <b>NASA’S Driven to Explore Mobile Exhibit</b>                | Parking Lot 5 (East Side of MPHY)                                       |
| 12:15 pm, 1:05 pm                    | <b>Large Hadron Collider Virtual Tours</b>                    | Hawking Auditorium (MIST MB01)  |
| 10:30 am, 12:00 pm, 1:30 pm, 2:30 pm | <b>Low Temperature Extravaganza</b>                           | Mitchell Physics Building (MPHY 213)                                    |
| 11:00 am – 12:00 pm                  | <b>Pictures With Reveille:</b> Texas A&M’s official mascot    | Outside Mitchell Physics (MPHY) and Mitchell Institute (MIST) Buildings |
| 2:30 pm – 3:45 pm                    | <b>Yell Leaders:</b> Texas A&M’s official spirit organization | Outside Mitchell Physics (MPHY) and Mitchell Institute (MIST) Buildings |



### SHOW OFF YOUR PHYSICS KNOWLEDGE AND WIN PRIZES!

Try the demo quiz, located on the first floor of the Mitchell Physics (MPHY) building.



ALL EVENTS ARE SPONSORED BY THE TEXAS A&M UNIVERSITY SYSTEM, THE COLLEGE OF SCIENCE, THE DEPARTMENT OF PHYSICS & ASTRONOMY, THE GEORGE P. AND CYNTHIA WOODS MITCHELL INSTITUTE, COL. HAL SCHADE '67, CHARLES R. '62 AND JUDITH G. MUNNERLYN, SUSAN SHESKEY, MICHELE MOBLEY '87, AHMED MAHMOUD '87, THE WILLARD AND ANNE LEVIN FOUNDATION, PURNA C. MURTHY '88, CC CREATIONS, SCHLOTZSKY'S COLLEGE STATION, AND PEPSI.

*Texas A&M University does not assume any supervisory responsibility for minors attending the festival.*

*By attending the Texas A&M University Physics & Engineering Festival, you do hereby grant Texas A&M University (TAMU) the right to create and/or utilize photographs or digital, video or audio recordings of yourself and/or your property and to use these for any educational, promotional, news or research materials and/or publications. Consent declaration: <https://physicsfestival.tamu.edu/photography-consent/>*

## 1st Floor, Mitchell Institute (MIST)

- A Century of Particle Detection
- Chaotic Pendulums
- Cornstarch Ion Trap
- Expanding Universe
- Foucault Pendulum
- Invisible Water Balls
- Magic Bubbles
- Pendulum Waves
- Resonant Pendulum
- Rubens' Tube
- Screaming Rods
- Skyhooks
- Tetrahedron Puzzle Blocks
- Van de Graaff Generator
- Vortex Generator (aka Smoke Ring Cannon)
- Walking Rings
- ...and many more!

## Laser Demos

107, 109 Laser Room  
1st Floor Mitchell Physics Building

## Texas Sized Tesla Coil

Basement, Mitchell Physics  
Building (MPHY)

## Dr. Lee's Lab

Basement, Mitchell Physics  
Building (MPHY)

## 2nd Floor, Mitchell Physics Building (MPHY)

- Physics of Cooking
- Atom Smasher
- Can Crusher
- Cryogenics "Cool Stuff"
- Downhill Race with Cookie Cans
- Eddy Current Pendulum
- Egg Roll
- Electromagnetic Alternator Bike
- Fun with Magnets
- Homer Robot
- Magnetic Slime
- Lenz's Law
- Levitron
- Magnetic Accelerator Rifle
- Make a Quake
- Jumping Rings
- Mirages and Light scattering
- Mouse Traps Chain Reaction
- Quadrotors and Helicopters
- The Toy Table for Chemists
- Tunes with Wine Glasses
- Tensegrity Robot
- ...and many more!

## Outdoor Areas

- Atmospheric Pressure
- Balloon Demo (Density Experiment)
- Briefcase Gyroscope
- Catapult
- Constarch Pool
- Coriolis Carousel
- Depth Charge
- Fire Piston
- Fire Tornado
- Floating Head
- Galileo's Cannon
- Fun with Friction
- Hovercraft
- Metronomes
- Lazy-susan & Hand Weights
- Liquid Sand
- Making a Comet
- Methane Bubbles
- Observing Sun Spots with telescope
- Optical Illusions
- Ping Pong Cannon
- Sand Lever
- Soapy Bubbles
- Sports Physics
- Square-Wheel Bicycle
- Third-Law Force Pair
- Vacuum Lifter
- Will Solar System Planets Float in a Giant Bathtub?
- Your Weight on Different Planets
- ...and many more!

## 1st Floor, Mitchell Physics Building (MPHY)

- Attracting Bowling Balls
- Bernoulli Principle with Leaf Blower
- Blue Sky
- Car Race Brachistochrone
- Chicks in Space
- Cloud Formation
- Color Mixing
- Demo Quiz
- Elipitcal Pool Table
- Fluorescence
- Galileo Feather and Coin
- Grapes Plasma
- Gravity Well
- Heron's Fountain
- Infinity Mirror
- Infrared Imaging
- Jacob's Ladder
- Laser Show
- Levitating Train
- Light Bending Demo
- Lissajous
- Multiple Reflection Mirrors
- Nitrogen Discharge Laser
- Non-newtonian Fluid
- Pipe Drums
- Polarization Demo
- Reike Tubes
- Shooting Balloons with a Laser
- Spoke POV
- Tornado
- ...and many more!