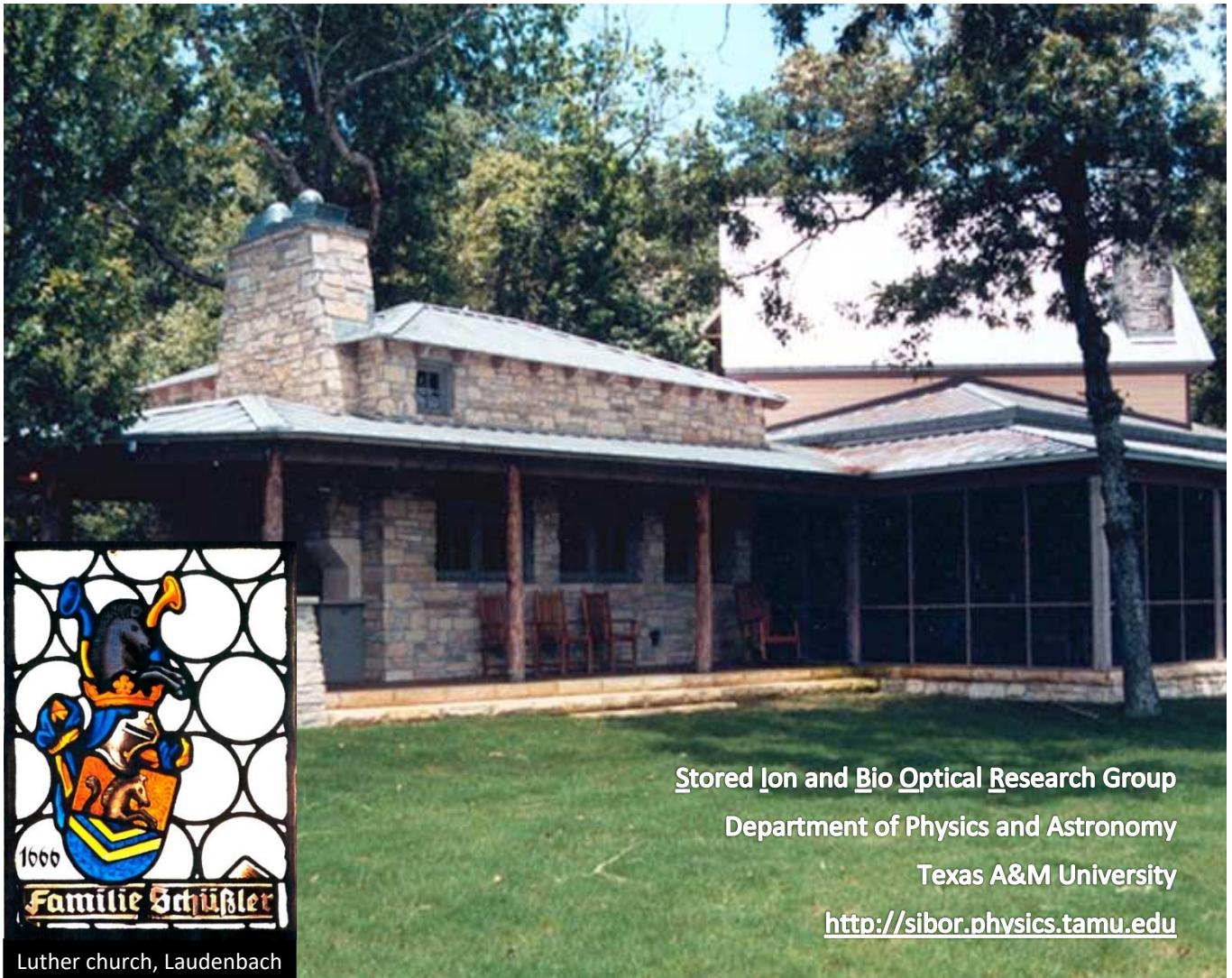




# Cook's Branch Conservancy

## SIBOR – Workshop

Friday, November 3, 2023



Luther church, Laudenbach

Stored Ion and Bio Optical Research Group  
Department of Physics and Astronomy  
Texas A&M University  
<http://sibor.physics.tamu.edu>



schuessler@physics.tamu.edu

November 3, 2023

The SIBOR and Attosecond group of  
the Department of Physics and Astronomy  
of Texas A&M University requests the  
pleasure of your company at  
a workshop at Cook's Branch Conservancy\*  
(Cynthia & George Mitchell Foundation)  
on Friday, November 3, 2023

Please RSVP by October 30, 2023

\* 7720 149N Montgomery, TX 77316 ([map](#))

<http://youtu.be/LJX5gFdNGjc>

# Program

**9:00 – 9:45** Arrival

**9:50** **Opening remarks by Darren DePoy, Associate Dean, Research Infrastructure Professor, Physics & Astronomy.**

**10:00 – 10:30** **Lifan Wang:** Professor, Department of Physics and Astronomy, Texas A&M University

*Artificial Intelligence of the Universe*

**10:35 – 11:05** **Ralf Rapp:** Professor, Department of Physics and Astronomy, Texas A&M University

*The Big Bang in the Laboratory*

**11:10 – 11:40** **Moritz Mehmet:** Research Associate Professor, Department of Physics and Astronomy, Texas A&M University

*Quantum-enhanced Gravitational Wave Detectors*

**11:45 – 12:15** **Jens Lassen:** Adjunct Professor, Simon Fraser University; TRIUMF, Vancouver, Canada

*Colinear Fast Beam Spectroscopy at TRIUMF and RAON  
[Delivered via Zoom]*

**12:30 – 13:50** Lunch

**13:50** Group Photograph

**14:00 – 14:30** **Krista Smith:** Associate Professor, Department of Physics and Astronomy, Texas A&M University

*Through the Kaleidoscope: A Dynamic, Panchromatic Look at Supermassive Black Holes  
[Delivered via Zoom]*

**14:30 – 16:00** **Short presentations: each 10 min including questions.**

**Romi Gilat:** Undergraduate Student in Electrical Engineering:  
“Incorporation of a Field Programmable Gate Array in Long Range Atmospheric Spectroscopy”

**Carlos Rodriguez:** *Ph.D. Student in Physics:* “Detection of Atmospheric CO<sub>2</sub> at Long Range”

**Eshtar Aluauee:** *Ph.D. Student in physics:* “Detecting Acetone Concentration in Human Breath with Cavity Ring-Down Spectroscopy Using a Field Programmable Gate Array”

**James Bounds:** *Ph.D. Student in Physics:* “Precision Spectroscopy of the Hyper-fine Structure and Isotope Shift of Xenon Isotopes using a Frequency Comb”

**Chris Shanks:** *Ph.D. Student in Physics:* “Performing Xenon Measurement with an External Cavity Diode Laser”

**Nicholas Schnoor:** *Ph.D. Student in Physics:* “Colinear Fast-Beam Detection and Measurement for Xenon”

**Micheal "Cain" Meadows:** *Ph.D. Student in physics:* “Diagnosis and Analysis of Lung Cancer using Ringdown and Gas-Chromatography Mass-Spectrometry”

**Joshua Hale:** *Ph.D. Student in physics:* “Breathtaking: Strategies for Real-time Calculation of Cardiac Output from Human Breath”

**16:00 –  
16:30** **Carl Tong:** Associate Professor, Department of Medical Physiology, Texas A&M University

*Combining In-vivo Pressure, Volume, and Fluorescence Measurements in Mouse Cardiac Tissue*

**16:30–  
17:00** Cold drinks break

**18:00 –  
18:30** Explore *Cook’s Branch Conservancy* and find the red woodpecker  
Presented outside the Pavilion  
**19:00** Departure

*We thank Sheridan Lorenz for hosting this workshop.*

## Directions to Cook's Branch Conservancy:

7720 149N Montgomery, TX 77316

### From College Station ([Google map](#)):

Hwy 6 South to Hwy 105 East (at Navasota)

105 East to Montgomery

Turn right (south) on 149 (S Liberty St. in Montgomery)

Go 6.7 Miles to Cook's Branch Conservancy entrance

Turn Left into Cook's Branch Conservancy

*There is a sign at Cook's Branch Conservancy, but it is easy to miss.*

*Follow posted signs.*

