

Kavli Community Updates feature announcements, news, events, and opportunities of interest to members and partners of the [20 Kavli Institutes around the world](#), where scientists explore the frontiers of science in the fields of astrophysics, nanoscience, neuroscience and theoretical physics.



### Spread the Word

Our community is always growing, especially this time of year as new faculty, postdocs, and students start their positions. Please share this [sign-up link](#) for Kavli Community Updates with Kavli Institutes colleagues.

## FALL EVENTS AND REMINDERS

### NANOSCIENCE

#### KNI DISTINGUISHED WEBINAR:

#### Responsive soft matter via 3D multi-material printing

WEBINAR | THE KAVLI NANOSCIENCE INSTITUTE

The Kavli Nanoscience Institute at Caltech invites Kavli community members to attend a special KNI Distinguished Webinar with Dr. Jennifer A. Lewis, Jianming Yu Professor of Arts and Sciences; Wyss Professor for Biologically Inspired Engineering in the Paulson School of Engineering and Applied Sciences; and core faculty member of the Wyss Institute at Harvard University. This event is taking place online via Zoom.

TUESDAY, OCTOBER 5, 2–5 PM EDT | 11 AM–2 PM PDT | 8 –11 PM CEST

[LEARN MORE](#)

[REGISTER TO RECEIVE THE ZOOM LINK](#)

### NEUROSCIENCE

#### 2021 Yale Kavli Workshop: Neuromodulation

VIRTUAL WORKSHOP | THE KAVLI INSTITUTE FOR NEUROSCIENCE

The Kavli Institute for Neuroscience is inviting all Kavli community members to attend the 2021 Yale Kavli Workshop "Neuromodulation," organized by Jess Cardin, PhD, and Michael Higley, MD, PhD. The virtual workshop will feature Yale researchers spanning neuromodulation in rodents, primates, and humans, and a keynote on

historical perspective and modern work using small circuits by Kavli Prize Laureate Eve Marder, PhD, from Brandeis University.

FRIDAY, OCTOBER 8, 2–5 PM EDT | 11 AM–2 PM PDT | 8 –11 PM CEST

- [SEE AGENDA AND LEARN MORE](#)
- [REGISTER TO RECIEVE THE ZOOM LINK](#)

#### **PUBLIC ENGAGEMENT WITH SCIENCE**

### **Science and Society Discussions**

VIRTUAL WEBINARS AND DISCUSSIONS | THE KAVLI FOUNDATION

The Kavli Foundation recently launched a new discussion series exploring the complex relationship between science and society. Through these Science and Society discussions, we will foster a community where you can connect with and learn from your colleagues at other Kavli Institutes, as well as experts, about topics to keep you on the forefront in your work to engage people outside the walls of your Institute.

[Register here](#) for the next discussion, *Building a Community: Mobilizing your Peers and Leveraging your Resources*, on Tuesday, November 2nd at 8AM PDT! Our expert panel will combine personal experiences with evidence-based theory and provide insights on achieving success in your public engagement practice.

Our first webinar, *Diversity, Equity, Inclusion, and Public Engagement with Science: Connections between Research and Practice*, took a critical look at how public engagement does—and does not—uphold diversity, equity, and inclusion. The recording will be available soon on our [website](#).

TUESDAY, NOVEMBER 2, 8 AM PDT | 10 AM CDT | 11 AM EDT | 4 PM CET  
11 PM China ST | 12 AM NOVEMBER 3 JST

- [LEARN MORE](#)
- [REGISTER](#)

#### **ASTROPHYSICS**

### **2021 Particle Acceleration in Solar Flares and the Plasma Universe – Deciphering its Features Under Magnetic Reconnection**

VIRTUAL WORKSHOP | THE KAVLI INSTITUTE FOR THE PHYSICS AND MATHEMATICS OF THE UNIVERSE

Kavli IPMU invites all Kavli community members to attend and submit abstracts for their five-day virtual workshop. The workshop aims to tackle the still unknown connection between particle acceleration and magnetic reconnection in the plasma universe.

MONDAY, NOVEMBER 15 – FRIDAY NOVEMBER 19

- 10 PM–3 AM JST DAILY
- 9 PM–2 AM CHINA | 2–7 PM CET
- 8 AM–1 PM EST | 7 AM-12 PM CST | 5–10AM PST

DEADLINES:

Abstract submission: October 19, 2021, 23:59 JST

Registration: November 10, 2021

[LEARN MORE](#)

[REGISTER](#)

## Join Kavli Communities on Slack

Have you used Slack? It's a great virtual space for keeping in touch with other scientists and starting conversations about your work and what is going on in your field.

To increase networking opportunities and foster community, The Kavli Foundation has launched astrophysics and neuroscience Slack workspaces for members and alumni of Kavli Institutes.

Join the conversation on Slack:

[KAVLI ASTROPHYSICS FORUM](#)

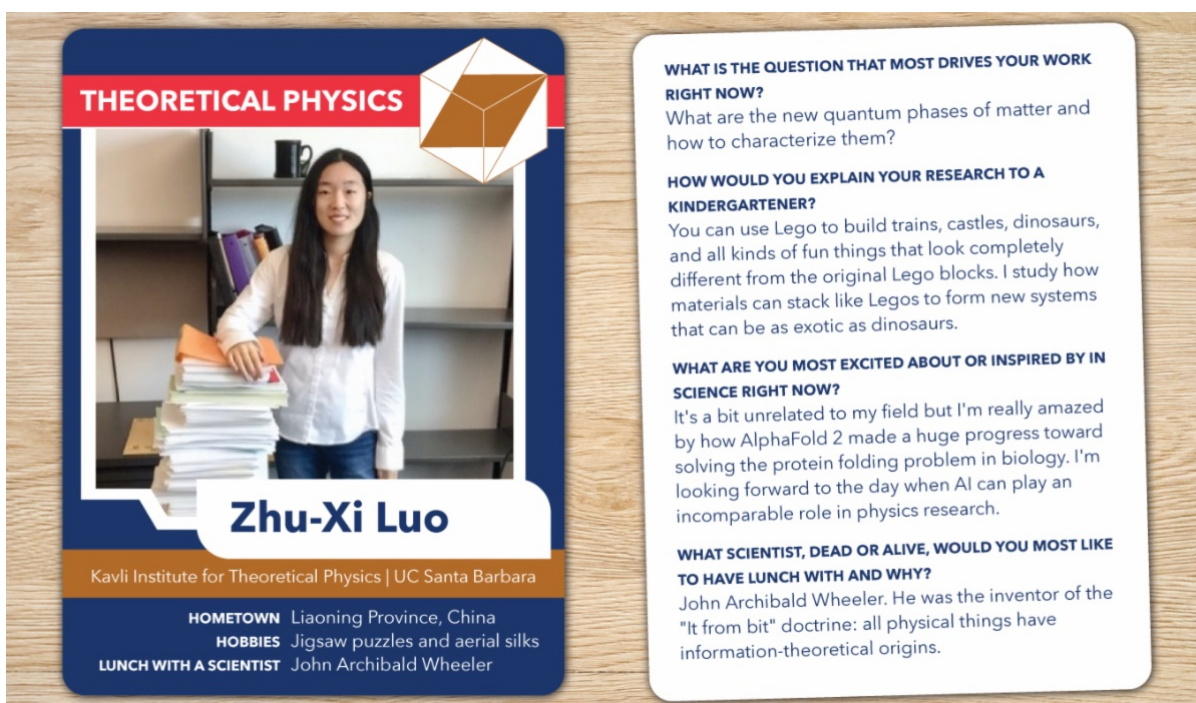
[KAVLI NEURO FUTURES](#)

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Discover more lectures, webinars, and conferences offered by The Kavli Foundation, Kavli Institutes, and partner organizations on the [Kavli Community Calendar](#).

## COMMUNITY SPOTLIGHT

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The image shows a community spotlight for Zhu-Xi Luo. On the left is a photo of her in a white lab coat standing next to a stack of papers. To the right is a white card with text on a wooden background. The card contains four questions and answers related to her research in theoretical physics.

**THEORETICAL PHYSICS**

**Zhu-Xi Luo**

Kavli Institute for Theoretical Physics | UC Santa Barbara

**HOMETOWN** Liaoning Province, China  
**HOBBIES** Jigsaw puzzles and aerial silks  
**LUNCH WITH A SCIENTIST** John Archibald Wheeler

**WHAT IS THE QUESTION THAT MOST DRIVES YOUR WORK RIGHT NOW?**  
What are the new quantum phases of matter and how to characterize them?

**HOW WOULD YOU EXPLAIN YOUR RESEARCH TO A KINDERGARTENER?**  
You can use Lego to build trains, castles, dinosaurs, and all kinds of fun things that look completely different from the original Lego blocks. I study how materials can stack like Legos to form new systems that can be as exotic as dinosaurs.

**WHAT ARE YOU MOST EXCITED ABOUT OR INSPIRED BY IN SCIENCE RIGHT NOW?**  
It's a bit unrelated to my field but I'm really amazed by how AlphaFold 2 made a huge progress toward solving the protein folding problem in biology. I'm looking forward to the day when AI can play an incomparable role in physics research.

**WHAT SCIENTIST, DEAD OR ALIVE, WOULD YOU MOST LIKE TO HAVE LUNCH WITH AND WHY?**  
John Archibald Wheeler. He was the inventor of the "It from bit" doctrine: all physical things have information-theoretical origins.

## Zhu–Xi Luo

KITP Postdoctoral Scholar, Condensed Matter Physics

KAVLI INSTITUTE FOR THEORETICAL PHYSICS, UNIVERSITY OF CALIFORNIA SANTA BARBARA

**Hometown:** Liaoning Province in China

**Favorite Scientific Discovery:** Poisson spot

**Favorite Book & Movie:** Mushi–Shi season 1 episode 6

**Most Unusual Job:** auditor

**Hobbies:** jigsaw puzzles and aerial silks

**Six–Word Memoir:** □□□□□□ "Shredded perch is not delicate enough"

*This is part of a Chinese poem by Qiji Xin written during the Song dynasty. There is a story that a man named Jiyong was away from home, working as a government official assisting the king during the Jin Dynasty. One day he suddenly remembers that it was the perch season in his hometown. So he resigns and returns home. "Jiyong's perch" is a term often used to describe hermits. In Qiji Xin's poem, he wrote about the ambition of serving his country and recovering the lost territories. With the phrase, □□□□□□ he wanted to say that no matter how he missed home, no matter how hard it was to reach his goal, he would not step back like Jiyong did.*

### How did you first become interested in science?

My interest in physics originated from a physics class back in high school, where my teacher Mr. Yuan discussed the nature of light. He followed the zigzag path of history and in particular told the story of Poisson's spot: Poisson was a supporter of Newton's particle theory of light and designed an experiment to disprove Fresnel's wave theory of light. But the experimental results, to Poisson's surprise, turned out to convince most scientists of the wave nature of light. I was deeply amazed: there is an undeniable truth in physics, however much you like/dislike it. There can be debates, fights and confusion, but in the end, people will agree with each other.

### What is the question that most drives your work right now?

What are the new quantum phases of matter and how to characterize them?

### What is a common misconception about your research or your field?

Misconception: Condensed matter physics = material science.

It's not. Condensed matter physics (CMP) studies the macroscopic, mesoscopic, and microscopic physical properties of matter, especially systems of many constituents coupled to each other through strong interactions. It's a fundamental branch of theoretical physics that can involve beautiful mathematical structures. There are also many CMP results that have far-reaching influences on high energy theory, such as the Anderson–Higgs Mechanism, the Nambu–Goldstone mode of spontaneous

symmetry breaking and more recently the Sachdev–Ye–Kitaev model, to name a few.

### **What advice would you give to women who are interested in pursuing a career in theoretical and mathematical physics?**

Congratulations, you have discovered a career that will fascinate you for a lifetime! You will never be bored. Three small suggestions: Trust yourself. Dive into the new, messy fields. Stay out of your comfort zone and move one more step forward.

### **What attracted you to doing your postdoc at KITP?**

It's certainly because KITP and UCSB have the best collection of condensed matter theorists. Another important reason is the year-round programs at KITP and the chances to talk to scientists from all over the world in person. Huge bonus: KITP also has the best staff and cookies!

## **IN THE NEWS**

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### **Researchers Conducting Sky Survey To Create Most-Detailed 3D Map Of Universe**

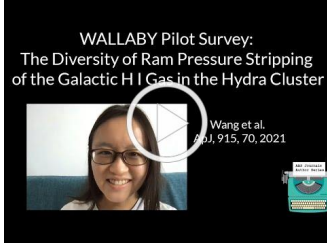
Risa Wechsler, Director of the Kavli Institute for Particle Astrophysics and Cosmology at Stanford University talks to Wisconsin Public Radio about the Dark Energy Spectroscopic Instrument "DESI" project. Listen to her conversation with host Rob Ferrett [here](#).

### **News8 Highlights Kavli Institute's Epilepsy Trial**

Kavli Institute for Neuroscience researchers at Yale–New Haven Hospital have started clinical trials for a new smart technology that incorporates thalamus stimulation to increase consciousness during active seizures into deep brain stimulation devices for the treatment of temporal lobe epilepsy. watch the news report featuring KIN neurologist Dr. Hal Blumenfeld [here](#).

### **The American Astronomical Society Journal Interviews Kavli Institute Researcher**

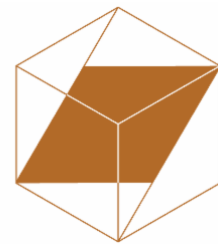
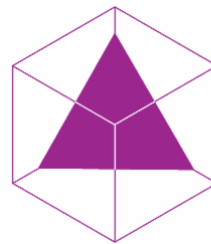
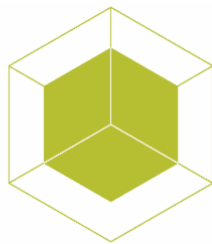
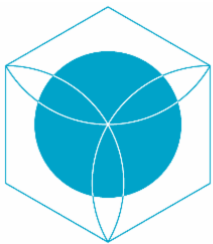
Assistant Professor Jing Wang of the Kavli Institute



for Astronomy and Astrophysics at Peking University was interviewed about her research, including a recent publication on gas stripping of galaxies. This hour and a half long [video](#) is part of the the AAS Journal Author Series which is focused toward active researchers.

## Scientific Sense Podcast Highlights the Science of the Rubin Observatory

In an interview for the Scientific Sense Podcast, Professor Steve Kahn of the Kavli Institute for Particle Astrophysics and Cosmology at Stanford University talks about the milky way, dark matter, science at the Vera Rubin Observatory, and much more. Watch the interview [here](#).



### ASTROPHYSICS

#### Black Holes, Astrophysical Tell-Alls

Kavli researchers continue to leverage the extreme natures of black holes for major insights into the universe's workings.

### NANOSCIENCE

#### Nanoscience Goes the Distance

Telemedicine, quantum magnets, and more from the Kavli Nanoscience Institutes.

### NEUROSCIENCE

#### The Neuroscience of Motivation

Research at Kavli Neuroscience Institutes spans athletic performance to decoding speech.

## OPPORTUNITIES

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Discover open positions and other opportunities within the Kavli Community.

To share an opportunity please send the details to [community@kavlifoundation.org](mailto:community@kavlifoundation.org).



## NANOSCIENCE

### Heising–Simons Junior Fellowship Nominations Due Sept 30

KAVLI ENERGY NANOSCIENCE INSTITUTE | UC BERKELEY

Kavli ENSI invites department chairs, faculty advisors, professors and research scientists to submit nominations for the HEISING–SIMONS JUNIOR FELLOWSHIP. These two–year postdoctoral fellowships are designed to attract the most talented and promising young researchers in nanoscale science to the Kavli Energy NanoScience Institute at Berkeley. Nominations are due September 30. Upon notification of their nomination, nominees will be asked to submit their full applications by no later than October 31, 2021.

[LEARN MORE](#)

### Kavli Institute at Cornell Postdoctoral Fellowship Applications

KAVLI INSTITUTE AT CORNELL FOR NANOSCALE SCIENCE | CORNELL UNIVERSITY

KIC Postdoctoral Fellowships are high–profile, two–year postdoctoral positions with significant independence and resources. A KIC Fellowship application must have at least two Cornell faculty sponsors, as well as the pre–approval of a KIC executive committee member. Applications are due October 15.

[LEARN MORE](#)

## NEUROSCIENCE

### Postdoc Postion in Norway

KAVLI INSTITUTE FOR SYSTEMS NEUROSCIENCE | NORWEGIAN UNIV OF SCIENCE AND TECHNOLOGY

Group Leader Maryam Ziaei is still recruiting a postdoc to a three year appointment focusing on neurocognitive processes of emotion and social cognition in aging. Application deadline is October 5, 2021

[LEARN MORE](#)

### Postdoctoral Fellowship for Academic Diversity

KAVLI INSTITUTE FOR NEUROSCIENCE | YALE UNIVERSITY

The Kavli Institute for Neuroscience at the Yale School of Medicine seeks to support exceptional scholars who bring a diversity of perspectives, identities, and backgrounds to academic research, including those from groups that are historically underrepresented in the sciences. This Fellowship will support up to two years of postdoctoral research in the neurosciences at Yale University. Applications will be accepted on a rolling basis.

[LEARN MORE](#)

### Intern and Research Assistant I Positions

KAVLI INSTITUTE FOR BRAIN AND MIND | UCSD / SALK INSTITUTE

Kay Taye's lab at KIBM is recruiting an intern and research assistant for work supporting behavioral and systems neuroscience research.

[LEARN MORE ABOUT THE INTERN POSITION](#)

[LEARN MORE ABOUT THE RESEARCH ASSISTANT 1 POSITION](#)

## Research Assistant I Position

KAVLI INSTITUTE FOR BRAIN AND MIND | UCSD / SALK INSTITUTE

[Kenta Asahina](#)'s lab at KIBM is recruiting a research assistant for work supporting histological and behavioral experiments using the fruit fly.

[LEARN MORE](#)

## THEORETICAL PHYSICS

### Postdocs in Quantum Materials Theory

KAVLI INSTITUTE FOR THEORETICAL PHYSICS | UC SANTA BARBARA

The Kavli Institute for Theoretical Physics (KITP) seeks applicants for two Moore Postdoctoral Scholar positions in quantum materials theory, beginning September 1, 2022. This postdoctoral program is part of the Gordon and Betty Moore Foundation's Emergent Phenomena in Quantum Systems initiative (EPiQS). Apply by November 1, 2021 for primary consideration.

[LEARN MORE](#)

### Postdocs in Theoretical Physics

KAVLI INSTITUTE FOR THEORETICAL PHYSICS | UC SANTA BARBARA

The Kavli Institute for Theoretical Physics at the University of California, Santa Barbara expects to appoint Postdoctoral Scholars in theoretical physics, beginning September 1, 2021. Apply by November 15, 2021 for primary consideration.

[LEARN MORE](#)

### Postdocs at Kavli IPMU

KAVLI INSTITUTE FOR THE PHYSICS AND MATHEMATICS OF THE UNIVERSE | UNIVERSITY OF TOKYO

Kavli IPMU solicits applications its Postdoctoral Fellowship program from scientists interested in conducting research in astrophysics, cosmology, high energy physics, mathematics, theoretical physics, science communication and public policy. All candidates are encouraged to apply by December 1, 2021.

[LEARN MORE](#)

### KITP Fellows

KAVLI INSTITUTE FOR THEORETICAL PHYSICS | UC SANTA BARBARA

The KITP Fellows program supports a single long visit (6–8 week) from experimentalists, observers or theorists in physics or astronomy departments at teaching-intensive U.S. colleges or universities designated as Minority Serving Institutions (MSIs). The application deadline in November 15, 2021.

[LEARN MORE](#)

### KITP Scholars



KAVLI INSTITUTE FOR THEORETICAL PHYSICS | UC SANTA BARBARA

The Kavli Institute for Theoretical Physics supports visiting researchers in physics who are faculty at teaching-intensive U.S. colleges for short visits over the course of three years. Scientists interested in this program should apply before December 15, 2021.

[LEARN MORE](#)

## ASTROPHYSICS

### Institute Managing Director Position

KAVLI INSTITUTE FOR PARTICLE ASTROPHYSICS AND COSMOLOGY | STANFORD UNIVERSITY

The Managing Director serves as the senior administrator for the Kavli Institute for Particle Astrophysics and Cosmology and a key participant in strategic planning and policy making, in partnership with the Director of the Institute and other faculty leadership.

[LEARN MORE](#)

### Outreach and Engagement Manager

KAVLI INSTITUTE FOR PARTICLE ASTROPHYSICS AND COSMOLOGY | STANFORD UNIVERSITY

KIPAC seeks an Outreach and Engagement Manager to develop, coordinate, and implement initiatives that engage the public with scientific discovery, broaden participation in astrophysics, and integrate equity and diversity as core values of the institute's activities.

[LEARN MORE](#)

### Kavli Institute Fellow/Senior Fellow

KAVLI INSTITUTE FOR COSMOLOGY, CAMBRIDGE | CAMBRIDGE UNIVERSITY

KICC is offering one or more, Kavli Fellowships in Cosmology and Astrophysics. Fellowships are funded for three years and are expected to begin in October 2022, with some flexibility. This application closes on October 25.

[LEARN MORE](#)

### Postdoc Positions in Pulsar Astronomy and Gravitational Astrophysics

KAVLI INSTITUTE FOR ASTRONOMY AND ASTROPHYSICS | PEKING UNIVERSITY

KIAA seeks qualified applicants for two positions to work with Professor Lijing Shao on topics related to pulsar astronomy and gravitational astrophysics. Start dates can range from December 1, 2021, to September 1, 2022. Applications will be evaluated on a rolling basis, beginning on October 15, 2021, until the positions are filled.

[LEARN MORE](#)

### Upcoming Postdoctoral Opportunities for Fall 2022

KAVLI INSTITUTE FOR PARTICLE ASTROPHYSICS AND COSMOLOGY | STANFORD UNIVERSITY

Multiple fellowships are available at KIPAC with deadlines of October 15 and November 1.

[LEARN MORE](#)

KAVLI INSTITUTE FOR COSMOLOGICAL PHYSICS | UNIVERSITY OF CHICAGO

Applications for 2022 KICP Fellowships are currently being accepted from scientists receiving a PhD in physics, astrophysics, astronomy, or related fields between May 2018 and September 2022. The positions will remain open until filled; however applicants are strongly encouraged to submit applications by October 31, 2021.

[LEARN MORE](#)

KAVLI INSTITUTE FOR THE PHYSICS AND MATHEMATICS OF THE UNIVERSE | UNIVERSITY OF TOKYO

Kavli IPMU solicits applications its Postdoctoral Fellowship program from scientists interested in conducting research in astrophysics, cosmology, high energy physics, mathematics, theoretical physics, science communication and public policy. All candidates are encouraged to apply by December 1, 2021.

[LEARN MORE](#)

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For questions, feedback, or to inform us of events and opportunities at your institute, please send an email to [community@kavlifoundation.org](mailto:community@kavlifoundation.org).

"It is my vision that these institutes will form an outstanding research core, to draw information from each other and promote interchange between disciplines by scientists around the world."

–FRED KAVLI

**THE KAVLI FOUNDATION** | [kavlifoundation.org](http://kavlifoundation.org)

