Approved by the Board of Trustees

March 28, 2024

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Board Meeting

March 28, 2024

APPOINT FELLOWS TO THE CENTER FOR ADVANCED STUDY, ACADEMIC YEAR 2024-2025, URBANA

**Action:** Appoint Fellows to the Center for Advanced Study, Academic Year 2024-2025

**Funding:** Gift Funds from the Beckman Endowment

Each year the Center for Advanced Study awards appointments as fellows in the Center for Advanced Study, providing one semester of release time for creative work. Fellows are selected in an annual competition from the untenured faculty of all departments and colleges to carry out self-initiated programs of scholarly research or professional activity.

The chancellor, University of Illinois Urbana-Champaign, and vice president, University of Illinois System, recommends the following list of fellows selected for Academic Year 2024-2025, and offers brief descriptions of their projects:

\*Jacob Covey, assistant professor, physics

*A Photonic Interface for Rydberg Atom Arrays*

This project seeks to develop a fully functional quantum networking node to link together quantum processors and quantum sensors composed of arrays of neutral atoms. The networking node is comprised of an ytterbium-171 atom array in an optical cavity that is designed for both fast readout of quantum information and for telecommunication-band long-distance entanglement.

\*Yi-Cheng Wang, assistant professor, food science and human nutrition,

*Development of Self-Powered Human-Safe Light-Based Sanitizers to Enhance Food Safety*

The proposed project aims to develop a low-cost, easy-to-use, and human-safe light-based technology that can provide continuous decontamination without the need for an external power source. If successful, it could revolutionize food safety in a variety of settings, including in individual homes and low-resource settings of all kinds.

Lei Zhao, assistant professor, civil and environmental engineering,

*A Planetary-Scale Data-Model Integration Framework to Address Grand Climate-Driven Challenges in Global Urban Environments*

Professor Zhao plans to establish a novel urban data-model integration framework and initiate an internationally coordinated urban modeling effort to advance fundamental understanding of climate-driven risks to global urban environments. The proposed plan will address critical long-standing research gaps in the climate fields, provide key urban-specific climate information for policymakers and the general public, and advance an actionable urban science to inform pathways toward a more sustainable urban future.

The Board action recommended in this item complies in all material respects with applicable State and federal laws, University of Illinois *Statutes*, *The General Rules Concerning University Organization and Procedure*, and Board of Trustees policies and directives.

The president of the University of Illinois System recommends approval.