



# PHYSICS AND ASTRONOMY SEMINAR

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Perimeter

## **How to Synthesize Heavy Elements: Neutron-star Mergers and Beyond**

Gravitational-wave and multi-messenger astronomy shed light on the astrophysics of black-hole and neutron-star binaries and also allow for unique probes of fundamental physics. I will discuss recent results on how neutron-star mergers and the death of massive, rotating stars (collapsars) give rise to the formation of heavy elements in the universe. In particular, I will discuss recent simulation results at the interface of numerical relativity, neutrino physics, and nuclear astrophysics, and highlight their implications for multi-messenger astrophysics and chemical evolution of the Milky Way.

Monday, May 10, 2021

2:00 p.m.

**Zoom link:** <https://uvic.zoom.us/j/82203756592>