

# Holy Cross College Physics Colloquium

Haberlin 219, 4 PM

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## **“Cosmic Explosions: Radio Transients from Supernovae to Tidal Disruption Events”**

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### **Abstract**

While most of the universe is static over our lifetime, a handful of "transient" events in the sky can change rapidly, on the time scale of just a few days or months. In practice, many of these transients originate from violent explosions, such as from a star exploding in a fiery supernova or a black hole ripping apart a star that wanders too close in a Tidal Disruption Event (TDE). In this talk, I will cover my research and experiences as a transient radio astronomer, where I use radio telescopes around the world to study these rare and enigmatic signals, in order to understand the physics behind their origins. This will cover objects such as Supernova 1987A- the closest observed supernova to Earth since the invention of the telescope- to AT2018hyz ("Jetty McJetface"), a TDE that launched a delayed, mildly relativistic outflow years after the initial event. I will also devote time to my journey in astrophysics, from student to professional astronomer.