WORKSHOP PROGRAM
The purpose of the workshop is to bring together the Midwest community interested in supernovae of all types, and transients in general, including kilonovae, fast radio bursts, TDEs, gamma-ray bursts etc. We will deal with all aspects of these objects, including the explosion mechanism, progenitors, evolution, nucleosynthesis, and radiation over all wavelengths from radio to gamma-rays.

Ample time would be given to students and postdocs, and significant time reserved for discussions.

Conference is organized by the Department of Astronomy and Astrophysics at the University of Chicago.

**Organizing Committee**

<table>
<thead>
<tr>
<th>Laura Chomiuk</th>
<th>Sean Couch</th>
<th>Vikram Dwarkadas</th>
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<tr>
<td>Michigan State University</td>
<td>Michigan State University</td>
<td>University of Chicago</td>
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**Paul Ricker**

University of Illinois Urbana-Champaign
Monday - February 25, 2019

8:05 AM - 9:00 AM  Breakfast

SESSION 1
Chair: Vikram Dwarkadas

9:00 AM - 9:10 AM  John Carlstrom, Astronomy and Astrophysics, University of Chicago
Welcome

9:10 AM - 9:20 AM  Vikram Dwarkadas, University of Chicago
Introduction and Logistics

9:20 AM - 9:40 AM  Kate D Alexander, Northwestern University - CIERA
Cosmic Extremes: Probing Energetic Transients with Radio Observations

9:40 AM - 9:55 AM  Jon Miller, University of Michigan
X-ray Observations of Tidal Disruption Events

9:55 AM - 10:10 AM  Anya E Nugent, Northwestern University
Analysis of A Short Gamma Ray Burst in an Old Galaxy Cluster

10:10 AM - 10:25 AM  Deanne L Coppejans, Northwestern University
Multi-wavelength studies of Fast-evolving Blue Optical Transients

10:25 AM - 10:40 AM  Maxim Lyutikov, Purdue
Transients following white dwarfs merger

10:40 AM - 11:00 AM  Coffee break

11:00 AM - 12:30 AM  SESSION 2
Chair: Sean Couch

11:00 AM - 11:20 AM  Tuguldur Sukhbold, The Ohio State University
Life and Death of Massive Stars

11:20 AM - 11:35 AM  Wilson Ricks, University of Chicago
Excavating the Explosion and Progenitor Properties of Type IIP Supernovae via Modelling of their Optical Lightcurves

11:35 AM - 11:50 AM  Giacomo Terreran, Northwestern University
The "He-rich" Type Ic SN 2016coi and its massive progenitor

11:50 AM - 12:05 PM  Danny Milisavljevic, Purdue University
Connecting Distant Supernovae with Nearby Supernova Remnants

12:05 PM - 12:30 AM  Morning Discussion

12:30 PM - 2:00 PM  Lunch

SESSION 3
Chair: Dan Milisavljevic

2:00 PM - 2:20 PM  Damiano Caprioli, University of Chicago
Towards a Comprehensive Theory of Diffusive Shock Acceleration
2:20 PM - 2:35 PM  Chelsea E Harris, Michigan State University  
*Which SNe Ia Come from the Single Degenerate Channel? The Answer Will Shock You.*

2:35 PM - 2:50 PM  Charlotte Wood, University of Notre Dame  
*The Slowly Fading Light Echo Around Type Ia Supernova 2009ig*

2:50 PM - 3:05 PM  Vikram Dwarkadas, University of Chicago  
*Investigating the X-ray Emission from High X-ray Luminosity SNe*

3:05 PM - 3:20 PM  Deep Chatterjee, University of Wisconsin Milwaukee  
*Predicting Supernova Rates Using iPTF: Estimating the transient detection efficiency*

3:20 PM - 3:35 PM  Noel D Richardson, University of Toledo  
*eta Carinae: A stellar system 170 years after a Great Eruption*

3:35 PM - 4:00 PM  Coffee Break

4:00 PM - 5:30 PM  **SESSION 4**  
*Chair: Paul Ricker*

4:00 PM - 4:15 PM  Xilu Wang, University of Notre Dame  
*Sandblasting The R-Process: Spallation Of The R-Process Nuclei Ejected From A NSNS Event*

4:15 PM - 4:30 PM  A. Miguel Holgado, University of Illinois at Urbana-Champaign  
*On the Formation of Double Neutron Stars from Supernova Natal Kicks*

4:30 PM - 4:45 PM  Antonella Palmese, Fermilab  
*Gravitational wave astrophysics and cosmology with DES galaxies*

4:45 PM - 5:00 PM  Chris Pankow, Northwestern University  
*Astronomy and Astrophysics with Gravitational Waves*

5:00 PM - 5:30 PM  Discussion

6:30 PM  Dinner
Tuesday - February 26, 2019

8:00 AM - 9:00 AM  Breakfast

SESSION 5  
Chair: Kate Alexander

9:00 AM - 9:20 AM  Mansi M. Kasliwal, Caltech  
*First results from the Zwicky Transient Facility*

9:20 AM - 9:35 AM  Sumit K Sarbadhicary, Michigan State University  
*Drilling deep into the transient radio sky with the CHILES-VERDES survey*

9:35 AM - 9:50 AM  Patrick Vallely, Ohio State University  
*ASAS-SN: Big Science with Small Telescopes*

9:50 AM - 10:05 AM  Gil Holder, University of Illinois  
*Transients in CMB Surveys*

10:05 AM - 10:20 AM  Rachel A Patton, The Ohio State University  
*Optical Depth Constraints on the Supernova Impostors SN 1954J and SN 1961V*

10:20 AM - 10:50 AM  Coffee Break

10:50 AM - 12:05 PM  SESSION 6  
Chair: Tuguldur Sukhbold

10:50 AM - 11:05 AM  Sean Couch, Michigan State University  
*The Turbulent Frontier in Massive Stellar Death*

11:05 AM - 11:20 AM  Michael A Pajkos, Michigan State University  
*Gravitational Wave Features from Rotating Core-Collapse Supernovae*

*Multimessenger signals from the landscape of core-collapse supernovae*

11:35 AM - 11:50 AM  Matthias Raives, The Ohio State University  
*The Antesonic Condition for Core-Collapse Supernovae*

11:50 AM - 12:05 PM  Brian Fields, University of Illinois  
*When Stars Attack! Confirmation, Identification, and Localization of a Recent Near-Earth Supernova*

12:05 PM - 12:30 PM  Morning Discussion

12:30 PM - 2:00 PM  Lunch

2:00 PM - 5:00 PM  SESSION 7  
Chair: Paul Ricker

2:00 PM - 2:15 PM  Albert Stebbins, Fermilab  
*Vacuum Pair Production and EMP for Short Radio Transients*

2:15 PM - 2:30 PM  Niharika Sravan, Purdue University  
*A comprehensive population-scale modeling of Type IIb supernova progenitors*
2:30 PM - 2:45 PM  Elias Aydi, Michigan State University  
A "shock" to the system - classical novae emitting gamma-rays

2:45 PM - 3:05 PM  Elad Steinberg, Columbia University  
Emission from Radiative Shocks

3:05 PM - 3:20 PM  Kirill Sokolovsky, Michigan State University  
Classical novae as X-ray transients: the case of Nova Carinae 2018

3:20 PM - 3:35 PM  Kerry Paterson, Northwestern University  
Rapid follow-up of neutron star mergers and short GRBs

3:35 PM - 4:00 PM  Coffee Break

4:00 PM - 5:05 PM  SESSION 8  
Chair: Mansi Kasliwal

4:00 PM - 4:20 PM  David Kaplan, UW-Milwaukee  
Radio Followup of Binary Neutron Star Mergers

4:20 PM - 4:35 PM  Zoheyr Doctor, Uchicago  
Search for Optical Emission from Binary-Black-Hole Merger 170814

4:35 PM - 4:50 PM  Aprajita Hajela, Northwestern University  
Developing New Technique to Measure the Ambient Density of GW170817

4:50 PM - 5:05 PM  Adithan Kathirgamaraju, Purdue University  
The non-thermal counterparts of GW170817: current observations and what we can expect in the future

5:00 PM - 5:30 PM  Final Discussion

5:30 PM  End