

John Banovetz

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Research interests Kinematic and chemical properties of young supernova remnants, especially age, explosion center, and 3D reconstructions; properties of diffuse interstellar bands.

Education **Ph.D., Physics, Purdue University** From September 2016
Advisor: Prof. Danny Milisavljevic
Utilizing Supernova Remnant Dynamics and Environments to Probe Core-collapse Explosions

B.S.,B.A., Physics and Chemistry, Hamline University May 2016
Advisors: Prof. Andy Rundqist and Deanna O'Donnell

Publications Author of 5 publications (1 first author) with 75 total citations and an h-index of 4. Author of 14 TNS classifications and meeting and proposal abstracts.

Approved Programs **CoI of 4 approved programs.** This included access to observing facilities such as the Hubble Space Telescope (3 orbits), the 3m Shane telescope at Lick Observatory (10 nights), and the 8.1m Gemini N telescope (5 hours).

Awards **Bilsland Dissertation Fellowship** Spring 2022

Teaching experience **Teaching Assistant/Lab Coordinator, Purdue University** Fall 2017-2018
AST 263/264
Graduate Teaching Assistant and Lab Coordinator for AST 263/264 laboratory sections.

Teaching Assistant, Purdue University Summer 2017
PHYS 241
Graduate Teaching Assistant for PHYS 241 recitation sections.

Teaching Assistant, Purdue University Fall 2016-Spring 2017
AST 263/264
Graduate Teaching Assistant for AST 263/264 laboratory sections.

Presentations

- Spoken WERRD, Northwestern University (virtually)** March 2021
5 minute presentation and Session Chair
- 237th Meeting of AAS** January 2021
Poster Presentation and Press Release
- Midwest Workshop on Supernovae and Transients** September 2019
Poster Presentation

Press Coverage

- The Tundra: Beyond Space** February 2021
Invited Presentation: Cosmic Bomb Squad: Investigating the Remnants of Stellar Explosions
<https://thetundra.com/conventions/beyond-space>
- Hubble Site** January 2021
Press Release: Researchers Rewind the Clock to Calculate Age and Site of Supernova Blast
<https://hubblesite.org/contents/news-releases/2021/news-2021-02>

Mentoring

- Danielle Dickinson** Research Experience for Undergraduates Summer 2020
Automating Citizen Scientist Contributions to REFITT
- Yuxin Dong** Summer Undergraduate Research Fellowship Summer 2019
Constraining the Progenitor Systems of Calcium-rich Transients
- Saurabh Mittal** Summer Undergraduate Research Fellowship Summer 2018
Evidence for a pulsar wind nebula-Late time X-ray emission from supernova 1970G

List of Publications

- Banovetz, J.** et al. 2021, “The Center of Expansion and Age of the Oxygen-rich Supernova Remnant 1E 0102.2-7219”, accepted for publication in *Astrophysical Journal*
- Law, C. et al. (11 other authors including **Banovetz, J.**) 2020, “Three-dimensional Kinematic Reconstruction of the Optically Emitting, High-velocity, Oxygen-rich Ejecta of Supernova Remnant N132D”, *Astrophysical Journal*, 894, 73
- Margutti, R. et al. (43 other authors including **Banovetz, J.**) 2019, “An Embedded X-Ray Source Shines through the Aspherical AT 2018cow: Revealing the Inner Workings of the Most Luminous Fast-evolving Optical Transients”, *Astrophysical Journal*, 872, A18

Milisavljevic, D. et al. (7 other authors including **Banovetz, J.**) 2018, “Evidence for a Pulsar Wind Nebula in the Type Ib Peculiar Supernova SN 2012au”, *Astrophysical Journal Letters*, 864, L36

First author, second author, third author, fourth author.

Journal of something or the other, 2020.

Cannon, J.M. et al. (12 other authors including **Banovetz, J.**) 2016, “Rotational Dynamics and Star Formation in the Nearby Dwarf Galaxy NGC 5238”, *Astronomical Journal*, 152, 202