

Aleksey Generozov

Department of Astronomy, Columbia University
550 West 120th St., New York, NY 10027
✉ ag@astro.columbia.edu

Education

- 2012-2018 **PhD, Astronomy (expected)**, *Columbia University*, New York, NY, Adviser: Brian Metzger.
- 2008-2012 **BS Physics**, *University of California, Santa Barbara*, Santa Barbara, CA.

Research Interests

I study gas and stellar dynamics in the vicinity of supermassive black holes (SMBHs) via analytic and numerical methods. Some of the questions my research touches on are:

- How do SMBHs grow and evolve over time?
- What do current radio observations say about the presence of jets/outflows in tidal disruption events (TDEs)?
- What uniquely identifiable high-energy sources (e.g. X-ray binaries) can be produced by collisional stellar dynamics in extreme environments?

Publications

- [6] An overabundance of X-ray binaries in the galactic center from tidal captures
A. Generozov, N.C. Stone, B.D. Metzger, J.P. Ostriker, 2017 *submitted to MNRAS*
- [5] The delay time distribution of tidal disruption flares
N.C. Stone, **A. Generozov**, E. Vasiliev, B.D. Metzger, 2017 *submitted to MNRAS*, [arXiv:1709.00423](https://arxiv.org/abs/1709.00423)
- [4] The influence of circumnuclear environment on the radio emission from TDE jets
A. Generozov, P. Mimica, B.D. Metzger, N.C. Stone, D. Giannios, and M.A. Aloy, 2017, [MNRAS](https://arxiv.org/abs/1709.00423), 464, 2481
- [3] Circumnuclear media of quiescent supermassive black holes
A. Generozov, N.C. Stone and B.D. Metzger, 2015, [MNRAS](https://arxiv.org/abs/1505.05441), 453, 775
- [2] Lyman edges in supermassive black hole binaries
A. Generozov and Z. Haiman, 2014, [MNRAS](https://arxiv.org/abs/1405.0001), 443, L64
- [1] Physical properties of the inner shocks in hot, tilted black hole accretion flows
A. Generozov, O. Blaes, P.C. Fragile, and K.B. Henisey, 2014, [ApJ](https://arxiv.org/abs/1405.0001), 780, 81

Talks

Formation of X-ray binaries in the Galactic Center via tidal capture

- *Harvard galaxies and cosmology seminar, Sep 2017*
- *CIERA theory seminar, Oct 2017*
- *IAS coffee talk, Nov 2017*
- *Princeton THUNCH seminar, Nov 2017*
- *MIT brown bag lunch seminar, Nov 2017*
- *UC Berkeley explosive astro seminar, Dec 2017*
- *UCSC FLASH Seminar, Dec 2017*
- *AAS 231, Jan 2018*

Radio emission from TDE jets

- *TDE17 workshop, Sep 2017*
- *MODEST workshop, Sep 2016*
- *Jerusalem TDE workshop, Nov 2015*([watch](#))

Lyman edges in supermassive black hole binaries

- *27th Texas relativistic astrophysics symposium, Dec 2013*

Summer schools and workshops

- Jul 2016 **PITP summer school**, *Summer school on astrophysical plasmas*, Princeton, New Jersey.
- Nov 2016 **ISSI workshop on tidal disruption events (invited participant)**, Bern, Switzerland.

Teaching

- Sep 2013 - May 2015 **Instructor for Intro Astronomy Lab**, Columbia University.

Outreach

- Sep 2013- **Volunteer for Columbia astronomy outreach**, *Roof/lecture volunteer for public outreach nights.*
- Apr 2014 **Volunteer for Saturday Science Starters**, *Showed physics demos to middle-school aged children.*
- Nov 2015 **Volunteer for Girls Science Day**, *Showed physics demos to middle-school aged girls.*
- Dec 2015 **"On the care and feeding of black holes"**, *Lecture for Columbia astronomy outreach.*

Academic service

- Nov 2015- Apr 2016 **Student representative on graduate admissions committee**, *Reviewed applications and organized visits for prospective students.*