

# Aleksey Generozov

Research Associate

JILA, University of Colorado Boulder

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## Education

2012-2018 **PhD, Astronomy**, *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?
- What uniquely identifiable high-energy sources (e.g. X-ray binaries) can be produced by collisional stellar dynamics in extreme environments?

## Publications

- [7] A generalized Bondi accretion model for the galactic centre  
A. Yalinewich, R. Sari, **A. Generozov**, N. Stone, B. Metzger, 2018, [MNRAS](#), 479, 4778
- [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, 2018, [MNRAS](#), 478, 4030
- [5] The delay time distribution of tidal disruption flares  
N.C. Stone, **A. Generozov**, E. Vasiliev, B.D. Metzger, 2017, [MNRAS](#), 480, 5060
- [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](#), 464, 2481
- [3] Circumnuclear media of quiescent supermassive black holes  
**A. Generozov**, N.C. Stone and B.D. Metzger, 2015, [MNRAS](#), 453, 775
- [2] Lyman edges in supermassive black hole binaries  
**A. Generozov** and Z. Haiman, 2014, [MNRAS](#), 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](#), 780, 81

## Talks

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

- CU Boulder CASA/JILA seminar, Aug 2018
- University of Crete, Jun 2018
- MODEST workshop, Jun 2018
- AAS 231, Jan 2018
- UCSC FLASH Seminar, Dec 2017
- UC Berkeley explosive astro seminar, Dec 2017
- MIT brown bag lunch seminar, Nov 2017
- Princeton THUNCH seminar, Nov 2017
- IAS coffee talk, Nov 2017
- CIERA theory seminar, Oct 2017
- Harvard galaxies and cosmology seminar, Sep 2017

### 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.*

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## Academic service

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