

Chalence T. Safranek-Shrader

CONTACT INFORMATION	University of California, Berkeley Department of Astronomy 501 Campbell Hall Berkeley, CA 94720 USA	<i>Phone:</i> (310) 625-8599 <i>E-mail:</i> ctss@berkeley.edu <i>Web:</i> https://chalence.github.io
RESEARCH INTERESTS	The first stars and galaxies, low-metallicity star formation, near-field cosmology, present-day star formation, scientific visualization.	
PROFESSIONAL APPOINTMENTS	University of California, Berkeley , Berkeley, California <i>Postdoctoral Fellow</i> February 2016 - present	
	University of California, Santa Cruz , Santa Cruz, California <i>Postdoctoral Fellow</i> August 2014 - January 2016	
EDUCATION	University of Texas at Austin , Austin, Texas Ph.D. Astronomy, July 2014 <ul style="list-style-type: none">• Dissertation Topic: “Star Formation in the First Galaxies”• Masters Thesis: “The Fragmentation of Cold Accretion Streams in the First Galaxies”• Advisors: Professors Volker Bromm and Miloš Milosavljević University of California, Los Angeles , Los Angeles, California B.S., Astrophysics, June 2007	
HONORS AND AWARDS	<ul style="list-style-type: none">• AAS Rodger Doxsey Travel Prize - Runner Up (2014)• Prize Poster Award, First Stars IV Conference (2012)• NASA Earth & Space Science Fellowship (2012-2014)• Fred T. Goetting, Jr. Memorial Endowed Presidential Scholarship (2011)• University of Texas at Austin Graduate School Continuing University Fellowship (2011-2012)• Texas Cosmology Center Summer Fellowship (2010)• McDonald Observatory Board of Visitors Best Second Year Defense (2010)	
ACADEMIC EXPERIENCE	Univeristy of Texas at Austin , Austin, Texas USA <i>Graduate Student</i> September 2008 - July 2014 Research and coursework towards Ph.D degree. <i>Teaching Assistant</i> September 2008 - May 2011 <ul style="list-style-type: none">• UGS (Undergraduate Studies) 303 Signature Course, Extraterrestrial Life, Prof. Neal Evans, Spring 2011• UGS 303 Signature Course, Popular Astronomy, Prof. Karl Gebhardt, Fall 2010• UGS 303 Signature Course, History and Philosophy of Astronomy, Prof. Volker Bromm, Fall 2009	

- Astronomy 353, Astrophysics (upper division), Prof. Volker Bromm, Spring 2008
- Astronomy 301, Introduction to Astronomy, Prof. Karl Gebhardt, Fall 2008

PUBLICATIONS

Safraneck-Shrader, C., Krumholz, M., Chang-Goo, K., Ostriker, E., Klein, R., Li, S., McKee, C., Stone, J. 2017. *Chemistry and radiative shielding in star-forming galactic discs*, MNRAS, 465, 885

Ritter, J., **Safraneck-Shrader, C.**, Milosavljevic, M., Bromm, V. 2016. *Towards ab initio extremely metal-poor stars*, MNRAS, 463, 3354

Milosavljevic, M., **Safraneck-Shrader, C.** 2016. *Star Formation for Predictive Primordial Galaxy Formation*, Astrophysics and Space Science Library, 423, 65

Safraneck-Shrader, C., Montgomery, M., Milosavljevic, M., Bromm, V. 2016. *Star formation in the first galaxies - III. Formation, evolution, and characteristics of the first metal-enriched stellar cluster*, MNRAS, 455, 3288

Sluder, A., Ritter, J., **Safraneck-Shrader, C.**, Milosavljevic, M., Bromm, V. 2016. *Abundance anomalies in metal-poor stars from Population III supernova ejecta hydrodynamics*, MNRAS, 456, 1410

Smith, A., **Safraneck-Shrader, C.**, Bromm, V., & Milosavljevic, M. 2015. *The Lyman-Alpha signature of the first galaxies*, MNRAS, 449, 4336

Zackrisson, E., Gonazlez, J., Eriksson, S., Asadi, S., **Safraneck-Shrader, C.**, Trenti, M., Inoue, A. 2014. *Primordial star clusters at extreme magnification*, MNRAS, 449, 3057

Ritter, J., Sluder, A., **Safraneck-Shrader, C.**, Milosavljevic, M., & Bromm, V. 2015. *Metal Transport and Chemical Heterogeneity in Early Star Forming Systems*, MNRAS, 451, 1190

Safraneck-Shrader, C., Milosavljevic, M., & Bromm, V. 2014. *Formation of the First Low-Mass Stars from Cosmological Initial Conditions*, MNRAS, 440, L76

Safraneck-Shrader, C., Milosavljevic, M., & Bromm, V. 2014. *Star Formation in the First Galaxies - II: Clustered Star Formation and the Influence of Metal Line Cooling*, MNRAS, 438, 1669

Safraneck-Shrader, C., Agarwal, M., Federrath, C., Dubey, A., Milosavljevic, M., & Bromm, V. 2012. *Star Formation in the First Galaxies - I: Collapse Delayed by Lyman-Werner Radiation*, MNRAS, 426, 1159

Ritter, J., **Safraneck-Shrader, C.**, Gnat, O., Milosavljevic, M., & Bromm, V. 2012. *Confined Population III Enrichment and the Prospects for Prompt Second-Generation Star Formation*, ApJ, 761, 56

Safraneck-Shrader, C., Bromm, V., & Milosavljevic, M. 2010. *Fragmentation in the First Galaxies*, ApJ, 723, 1568

CONFERENCE PROCEEDINGS

Safraneck-Shrader, C., Milosavljevic, M., Bromm, V., 2013. *Clustered Star Formation in the First Galaxies and the Influence of Metal Line Cooling*. Mind the Gap,

Cambridge, UK, July 2013.

Safranek-Shrader, C., Milosavljevic, M., Bromm, V., 2012. Lyman-Werner Radiation Delayed Collapse of Metal-free Gas in the First Galaxies. First Stars IV, Kyoto, Japan, May 2012.

Safranek-Shrader, C., Milosavljevic, M., Bromm, V., 2011. Metal Free Star Formation in the First Galaxies. Bash Fest 2011, Austin, TX, October 2011.

Safranek-Shrader C., Bromm V., Milosavljevic M. 2010. Fragmentation in the First Galaxies. First Stars and Galaxies: Challenges for the Next Decade, Austin, TX, March 2010.

Safranek-Shrader C., Bromm V., Milosavljevic M. 2009. Fragmentation in the First Galaxies. Bash Fest 2009, Austin, TX, October 2009.

CONFERENCES /
WORKSHOPS

American Astronomical Society Winter Meeting. Washington D.C., January 2014

Frank N. Bash Symposium (Bash Fest). Austin, TX, October 2009, 2011, 2013.

Mind the Gap: From microphysics to large-scale structure in the Universe. Cambridge, UK, July 2013.

Nealfest: Observing the Universe from Molecules to Galaxies. Austin, TX, April 2013.

First Stars IV: From Hayashi to the Future. Kyoto, Japan, May 2012.

American Astronomical Society Winter Meeting. Austin, TX, January 2012.

Fifth Heidelberg Summer School on the First Stars and Cosmic Reionization. Heidelberg, Germany, September 2010.

The First Stars and Galaxies: Challenges for the Next Decade. Austin, TX, March 2010.

Texas Advanced Computing Center Summer Supercomputing Institute. Austin, TX, August 2009.

American Astronomical Society Winter Meeting. Long Beach, CA, January 2008.

NON-ACADEMIC
INTERESTS

Rock climbing, piano, cooking, volleyball, ultimate frisbee, tennis.