

# Dr. Sijie Yu

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## Education

Univ. of Chinese Academy of Sciences	Beijing, China	Astrophysics	PhD	2015
Univ. of Science and Technology of China	Hefei, China	Geophysics	BS	2010

## Appointments

<i>Assistant Research Professor</i> , New Jersey Institute of Technology	06/2020–present
<i>Postdoctoral Researcher</i> , New Jersey Institute of Technology	06/2016–06/2020
<i>Assistant researcher</i> , National Astronomical Observatories of China	07/2015–06/2016

## Honors & Awards

<i>NASA Heliophysics Early Career Investigator Award (ECIP)</i> , NASA	2020
<i>Pollyanna Chu Award for Excellent Ph.D Graduates</i> , Chinese Academy of Sciences	2015
<i>National Scholarship for Graduate student</i> , Ministry of Finance of the P.R.C	2012

## Professional Service

### Meetings and Workshops

*Organizer and moderator*, [Solar-Terrestrial Research Journal Club](#), NJIT 2018–present

### Peer Review Activities

*Poster Judge*, AGU fall meeting 2019–present

*Referee*, Various Journals 2015–present

*ApJ* [3], *A&A* [1], *Front. Phys.* [1] and *Res. Astron. Astrophys* [1].

*Panelist*, for [1] NASA grant panel 2021–present

## Awarded Grants

### As Principle Investigator

PI, Heliophysics Early Career Investigators Program 2021–2025

“Probing weak energy release in quiescent solar active regions”

### As Co-Investigator

Co-I (PI K. Reeves), NASA HSO Connect 2020–2023

“Energetics of solar eruptions from the chromosphere to the inner heliosphere”

## Instrumentation Projects

- Expanded Owens Valley Solar Array (EOVSA)* 2016–present  
EOVSA team member, one of the main developers of EOVSA data calibration and imaging pipeline.
- Jansky Very Large Array (VLA)* 2016–present  
Played a key role (with B. Chen & T. Bastian) in commissioning *Jansky VLA* for solar observing at P band. PI for one *Jansky VLA* solar observing programs (3 additional programs as Co-I) through a competed selection process.

## Software Developments

- SunCASA (CASA-based Python package for reducing, analyzing, and visualizing solar radio spectroscopic imaging data; <https://github.com/suncasa/suncasa>)
- EOVSAPY (Python code and files for EOVSA; <https://github.com/dgary50/eovsa>)

## Refereed Publications

(Full Publication list available <https://orcid.org/0000-0003-2872-2614>)

Publications as Main Author (1<sup>st</sup> and 2<sup>nd</sup>; \* denotes papers led by students)

- (2020) **Yu, S.**, Chen, B., Reeves, K. K., et al., “Magnetic Reconnection During the Post-Impulsive Phase of a Long-Duration Solar Flare: Bi-Directional Outflows as a Cause of Microwave and X-ray Bursts”, *Astrophys. J.*, 900, 1, ([DOI](#))
- (2020) Chen, B., **Yu, S.**, Reeves, K. K., Gary, D. E., “Microwave Spectral Imaging of an Erupting Magnetic Flux Rope: Implications for the Standard Solar Flare Model in Three Dimensions”, *Astrophys. J.*, **895**, 50 ([ADS](#))
- (2019) Zhang, P.\*, **Yu, S.**, Kontar, E. P., et al., “On the Source Position and Duration of a Solar Type III Radio Burst Observed by LOFAR”, *Astrophys. J.*, **885**, 140 ([ADS](#))
- (2019) **Yu, S.**, & Chen, B., “Possible Detection of Subsecond-period Propagating Magneto-hydrodynamics Waves in Post-reconnection Magnetic Loops during a Two-ribbon Solar Flare”, *Astrophys. J.*, **872**, 71 ([ADS](#))
- (2018) Chen, B., **Yu, S.**, Battaglia, M., et al., “Magnetic Reconnection Null Points as the Origin of Semirelativistic Electron Beams in a Solar Jet”, *Astrophys. J.*, **866**, 62 ([ADS](#))
- (2017) Kontar, E., **Yu, S.**, Kuznetsov, A. A., et al., “Imaging spectroscopy of solar radio burst fine structures”, *Nat. Comm.*, **8**, 1515 ([ADS](#))
- (2016) **Yu, S.**, Nakariakov, V. M., & Yan, Y., “Effect of a Sausage Oscillation on Radio Zebra-pattern Structures in a Solar Flare”, *Astrophys. J.*, **826**, 78 ([ADS](#))
- (2013) **Yu, S.**, Nakariakov, V. M., Selzer, L. A., et al., “Quasi-periodic Wiggles of Microwave Zebra Structures in a Solar Flare”, *Astrophys. J.*, **777**, 159 ([ADS](#))

(2012) **Yu, S.**, Yan, Y., & Tan, B., “Relaxation of Magnetic Field Relative to Plasma Density Revealed from Microwave Zebra Patterns Associated with Solar Flares”, *Astrophys. J.*, **761**, 136 ([ADS](#))

#### Publications as Supporting Author

(2020) Chen, B., Shen, C., Gary, D. E., Reeves, K. K., Fleishman, G. D., **Yu, S.**, Guo, F., Krucker, S., Lin, J., Nita, G. M., Kong, X., “Measurement of magnetic field and relativistic electrons along a solar flare current sheet”, *Nat. Astron* ([ADS](#))

(2020) Korsós, M. B.; Georgoulis, M. K.; Gyenge, N.; Bisoi, S. K.; **Yu, S.**; Poedts, S.; Nelson, C. J.; Liu, J.; Yan, Y.; Erdélyi, R., “Solar Flare Prediction Using Magnetic Field Diagnostics above the Photosphere”, *Astrophys. J.* ([ADS](#))

(2020) Fleishman, G. D., Gary, D. E., Chen, B., Kuroda, N., **Yu, S.**, Nita, G., “Decay of the Coronal Magnetic Field can Release Sufficient Energy to Power a Solar Flare”, *Science*, **367**, 278 ([Science](#))

(2018) Gary, D. E., Chen, B., Dennis, B. R., Fleishman, G. D., Hurford, G. J., Krucker, S., McTiernan, J. M., Nita, G. M., Shih, A. Y., White, S. M., & **Yu, S.**, “Microwave and Hard X-Ray Observations of the 2017 September 10 Solar Limb Flare”, *Astrophys. J.*, **863**, 83 ([ADS](#))

(2018) Chen, X.\*, Kontar, E., **Yu, S.**, et al., “Fine Structures of Solar Radio Type III Bursts and Their Possible Relationship with Coronal Density Turbulence”, *Astrophys. J.*, **856**, 73 ([ADS](#))

(2016) Yan, Y., Chen, L., & **Yu, S.**, “First radio burst imaging observation from Mingantu Ultrawide Spectral Radioheliograph”, *Solar and Stellar Flares and their Effects on Planets*, **320**, 427 ([ADS](#))

(2016) Su, J.; Ji, K.; Banerjee, D.; Cao, W.; Priya, T.; Zhao, J.; **Yu, S.**; Ji, H.; Zhang, M., “Interference of the Running Waves at Light Bridges of a Sunspot”, *Astrophys. J.*, **816**, 1 ([ADS](#))

(2016) Chen, J.; Su, J.; Yin, Z.; Priya, T. G.; Zhang, H.; Liu, J.; Xu, H.; **Yu, S.**, “Recurrent Solar Jets Induced by a Satellite Spot and Moving Magnetic Features”, *Astrophys. J.*, **815**, 1 ([ADS](#))

(2010) Wang, Y.; Cao, H.; Chen, J.; Zhang, T.; **Yu, S.**; Zheng, H.; Shen, C.; Zhang, J.; Wang, S., “Solar Limb Prominence Catcher and Tracker (SLIPCAT): An Automated System and its Preliminary Statistical Results”, *Astrophys. J.*, **717**, 2 ([ADS](#))

#### **Recent Conference Presentations**

(12/2019) “Imaging Spectroscopic Observations of Type I Noise Storms with Ultrahigh Temporal and Spectral Resolution”, *AGU Fall Meeting*, San Francisco, CA

(05/2019) “Short-period Waves in Flare Loops: Possible Vehicle for Flare Energy Transport”, *RHESSI-18 workshop*, Minneapolis, MN

- (05/2019) “Fast plasma outflows associated with impulsive microwave and hard X-ray bursts during the gradual phase of the 2017 September 10 X8.2 flare”, *RHESSI-18 workshop*, Minneapolis, MN
- (03/2019) “Particle acceleration in the late phase of the 2017 September 10 limb flare”, *Magnetic Reconnection and Particle Acceleration in Solar Flares workshop*, Los Alamos, NM
- (12/2018) “Microwave Spectroscopic Imaging of the Decay Phase of the X8.2 flare on 2017 Sep 10”, *AGU Fall Meeting*, Washington, DC
- (12/2017) “Radio Spectral Imaging of Coronal Loops Compression During the Impulsive Phase of a Solar Flare”, *AGU Fall Meeting*, New Orleans, LA
- (06/2017) “Imaging spectroscopic observation of a new type of decimetric burst in a solar flare by VLA”, *RHESSI-16 workshop*, Boulder, CO
- (12/2016) “VLA imaging spectroscopic observations of a decimetric radio burst: radio signature of a wave-like phenomenon?”, *AGU Fall Meeting*, San Francisco, CA