Dr. Bin Chen

Department of Physics
New Jersey Institute of Technology
323 Martin Luther King Jr. Blvd
Newark, NJ 07102

Phone: (973) 596-3565
Fax: (973) 596-3617
Email: binchen[at]njit.edu
http://web.njit.edu/~binchen

Education

University of Virginia	Charlottesville, VA	Astronomy	Ph.D. & M.S.	2013
Dissertation: "Radio and X-ray Diagnostics of Energy Release in Solar Flares", Advisor: Tim Bastian				
Univ. of Chinese Academy of Sc.	Beijing, China	Astrophysics	M.S.	2008
Peking University	Beijing, China	Physics	B.S.	2005

Appointments

Associate Professor	New Jersey Institute of Technology	08/2019–present
Assistant Professor	New Jersey Institute of Technology	01/2016–08/2019
Astrophysicist	Center for Astrophysics | Harvard & Smithsonian	08/2014–12/2015
Postdoctoral Fellow	New Jersey Institute of Technology/Univ. Corp. Atmos. Res.	08/2013–07/2014

Honors & Awards

Research Advisor of the Year, Albert Dorman Honors College, New Jersey Institute of Technology 2020

CSLA Rising Star Research Award, New Jersey Institute of Technology 2018

An award given annually by NJIT's College of Science and Liberal Arts in recognition of a pre-tenure faculty member's outstanding scholarly work

Faculty Early Career Development (CAREER) Award, National Science Foundation 2017

Jack Eddy Postdoctoral Fellowship, NASA/UCAR 2013

Competitive Postdoctoral fellowship by NASA's Living-with-a-Star program and UCAR

Liu Yong Ling Scholarship, University of Chinese Academy of Sciences 2008

A scholarship of the University to recognize outstanding graduate students

Professional and Community Service

Committees and Boards

Committee member, Solar Physics Division of American Astronomical Society 06/2019–present

Participating in planning SPD Meetings; Discussing and voting on various SPD business affairs; Organized and made a List of Solar Physics Graduate Programs available to community

Board member, SunPy 08/2019–present

Oversee affairs of the SunPy community with other board members

Organizing Meetings

Working group (co-)leader, for three (3) RHESSI Workshops — 2015, 2017, 2019
"Radio and X-ray Flares" working group

Session convener, for two (2) SHINE Conferences — 2018, 2019
"Global implications of kinetic-scale particle acceleration throughout the heliosphere"

Session Convener, Asia Oceania Geosciences Society — 08/2021
"Coronal Magnetic Field Measurements Through Multi-wavelength Observations"

Session Convener, American Geophysical Union Fall Meeting — 12/2020
"Plasma Energization, Particle Acceleration, and High-energy Emission in Solar Flares"

Session Convener, Triennial Earth-Sun Summit (TESS) — 05/2018
"Late-Phase Solar Activity in September 2017"

Peer Review Activities

Panelist, NRAO Science Review Panel — 2020, 2021

Panelist, for [3] NASA grant panels and [1] NSF grant panel — Since 2015

Mail-in Reviewer, for [6] grant proposals submitted to NASA or NSF funding programs — Since 2015

Panelist, NASA NPP Postdoc Fellowship proposals — 2017

Mail-in reviewer, for [3] NASA NPP Postdoc Fellowship proposals — Since 2016

Poster Judge, SHINE conference, AAS/SPD meeting, and APS meeting — Since 2016

Referee, 27 papers for 11 journals
Nature Astronomy [1], *Astrophysical Journal* [8], *Astrophysical Journal Letters* [4], *Astronomy & Astrophysics* [3], *Solar Physics* [4], *Advances in Space Research* [1], *Publ. Astron. Soc. Australia* [1], *New Astronomy* [2], *J. Space Weather. Space Clim.* [1], *Research in Astronomy & Astrophysics* [1], *Progress in Astronomy* (天文学进展) [1]

Journal Editing

Guest Editor, *Frontiers in Astronomy and Space Sciences* — 09/2019–present
For topical issue on "Solar and Space Weather Radio Physics"

University & Departmental Service

Director, Applied Physics Graduate Program, NJIT — 08/2020–present

Committee Member, Applied Physics Graduate Program, NJIT — 01/2016–present

Member, Research Vision Subcommittee for NJIT 2025 Strategic Plan — 03/2019–present

Member, Search committee for a faculty position in material sciences — Fall 2018

Member, Advisory Board Committee on Research Cyberinfrastructure — 08/2018–present

Awarded Grants

As Principal Investigator or Institutional Principal Investigator

PI, NASA Heliophysics Supporting Research, $549k 2020–2023
"Exploring Energy Release and Conversion in Solar Eruptive Events Using Multi-wavelength Observations and Numerical Simulations"

Institutional PI, NASA HSO Connect, $292k 2020–2023
"Energetics of solar eruptions from the chromosphere to the inner heliosphere" (PI: K. Reeves)

PI, NSF CAREER, $717k 2017–2021
"Probing Energy Release in Solar Explosive Events with New Generation Radio Telescopes"

Institutional PI, NSF SHINE, $111k 2017–2020
"Collaborative Research: Magnetic Energy Release During Solar Eruptions: From Large and Small Scales" (PI: K. Reeves)

Institutional PI, NSF Division of Astronomical Sciences, $178k 2017–2020
"Collaborative Research: Electron Acceleration and Emissions from the Solar Flare Termination Shock" (PI: G. Fan)

PI, NASA Heliophysics Guest Investigator, $460k 2016–2019
"Particle Energization in Solar Flares: Combing Observations from a Suite of NASA Missions with the Jansky Very Large Array"

As Co-Investigator

Co-PI, NSF Division of Astronomical Sciences 2021–2024
"REU Site: Solar, Terrestrial, and Space Weather Sciences at New Jersey Institute of Technology" (PI: H. Kim)

Co-I, NASA HSO Connect 2020–2023
"Study of Small Scale Magnetic Reconnection and Energy Release in the Source Regions of Solar Wind" (PI: H. Wang)

Co-I, NASA Heliophysics DRIVE Science Center 2020–2022
"Solar Flare Energy Release" (PI: J. Drake)

Co-I, NASA HSO Data Support 2019–2021
"Microwave Imaging Spectroscopy Support for Parker Solar Probe" (PI: D. Gary)

Co-PI, NSF Division of Astronomical Sciences 2019–2020
"Microwave Imaging Spectropolarimetry of the Sun and Solar Activity" (PI: D. Gary)

Large Collaborative Projects

Ground-based Facilities

Expanded Owens Valley Solar Array (EOVSA) 2016–present
Co-leading (with Director D. Gary) instrument commissioning, calibration, software development, and science investigation.

Karl G. Jansky Very Large Array (JVLA) 2011–present

Commissioned the solar observing mode of JVLA as part of Ph.D. thesis project (advised by T. Bastian). PI or Co-I on (13) JVLA solar observing programs through a competitive selection process.

Atacama Large (sub)Millimeter Array (ALMA) 2014–present

Member of the ALMA solar development team. PI or Co-I on (4) solar observing programs through a competitive selection process.

Frequency Agile Solar Radiotelescope (FASR) 2015–present

Member of the core FASR group. FASR is a next-generation solar radio telescope concept recommended by multiple NRC decadal surveys as a midscale project. Co-PI on two proposals submitted to NSF for FASR design and implementation (not selected). Lead author or co-author on six white papers on FASR science/instrumentation submitted to 2020 NRC Decadal Survey on Astronomy and Astrophysics (Astro2020).

Spacecraft Missions

Physics of Energetic and Non-thermal plasmas in the X region (PhoENiX) 2019–present

Co-I, science team member. PhoENiX (PI: N. Narukage) is a mid-class ($150M) spacecraft mission to study X-rays from solar flares. The PhoENiX proposal was submitted to JAXA in Feburary 2020.

The Focusing Optics X-ray Solar Imager (FOXSI) 2017–2019

Collaborator, science team member. FOXSI (PI: S. Christe) is a solar hard X-ray telescope proposed to NASA as a Heliophysics Small Explorer (SMEX) mission. It was selected for Phase A concept study, but not selected as a full mission.

COronal Spectrographic Imager in the Extreme ultraviolet (COSIE) 2018–2019

Co-I, science team member. COSIE (PI: L. Golub) is a wide-field solar EUV spectrographic imager being proposed to NASA as a Mission of Opportunity Small Complete Mission. Selected for technical development in 2017, but not selected as a full mission.

Heliophysics Radio Observer (HeRO) 2016–2017

Co-I, science team member. HeRO (PI: D. Gary) is a space-based radio interferometer proposed to NASA for concept study as a Mission of Opportunity Small Complete Mission in 2017 (not selected).

Heliophysics DRIVE Science Center

Solar Flare Energy Release (SolFER) 01/2020–present

Co-I, working group leader (co-leader F. Guo) on "electron energization in solar flares". SolFER (PI: J. Drake) is one of the nine Heliophysics DRIVE Science Centers selected for Phase I study.

Student & Postdoc Mentorship

Postdoctoral Researchers

Dr. Sijie Yu	NJIT	Advisor	06/2016–08/2020

Dr. Yu was promoted to Assistant Research Professor in August 2020.

Current Ph.D. Students

Meiqi Wang	NJIT	Advisor	09/2019–present

Yuqian Wei	NJIT	Co-Advisor (with H. Wang)	07/2017–present
Yingjie Luo	NJIT	Advisor	09/2016–present
Matthew Cooper	NJIT	Thesis Committee Member	09/2019–present
Yi Chai	NJIT	Thesis Committee Member	07/2018–present
Sherry Chhabra	NJIT	Thesis Committee Member	09/2017–present
Shaheda Shaik	NJIT	Thesis Committee Member	04/2016–present

Past Ph.D. Students

Dr. Zhitao Wang	NJIT	Co-Advisor (with D. Gary)	11/2014–08/2017

Dr. Wang Obtained his PhD in 2017. He is now a Big Data Engineer at HSBC.

Dr. Viacheslav Sadykov	NJIT	Thesis Committee Member	01/2017–08/2019

Dr. Sadykov Obtained his PhD in 2019. He is now a tenure-track Assistant Professor at Georgia State University.

Current Undergrad Students

Sarthak Mital	NJIT	Advisor	05/2020–present

Past Undergrad Students

Samantha Lomuscio	NJIT	Advisor	10/2017–05/2020

Samantha was awarded the prestigious Barry M. Goldwater Scholarship in 2019 under my guidance. She is now pursuing Ph.D. in Astronomy at University of Virginia after her graduation in Spring 2020.

Jordan Smith	NJIT	Advisor	08/2020–12/2020
Sylwia Janiak	NJIT	Advisor	10/2016–08/2019
Marchello Caruso	NJIT	Advisor	04/2018–11/2018
Alexander Rodriguez	NJIT	Advisor	Summer 2018, 2019
Lindsey Gray	Ramapo College	Advisor	Summer 2016
Michael Prijatelj	Carnegie Mellon Univ.	Advisor	Summer 2015

High School Students

Rahul Harikrishnan	Montgomery High	Advisor	Summer 2018
Chris Stone	High Tech High	Advisor	Summer 2017
Daniel Vesecky	Milburn High	Advisor	Summer 2017
Tim Kouzmenkov	Fair Lawn High	Advisor	Summer 2016, 2017

Teaching

Phys 111 – Mechanics	NJIT	Fall 2016, 2017, 2018, 2019
Phys 320 – Astronomy and Astrophysics I	NJIT	Fall 2020
Phys 321 – Astronomy and Astrophysics II	NJIT	Spring 2018, 2019, 2020, 2021
Phys 780 – Solar Flares and CMEs	NJIT	Spring 2017
ASTR 3480 – Introduction to Cosmology	Univ. of Virginia	Summer 2012

Publications

43 referred journal articles and book chapters
17 refereed publications as first author or first senior author on student/postdoc papers
H-index: 17, Citations: 842 (SAO/NASA ADS)

Refereed Publications as Lead Author†

†First author or first senior author on student/postdoc papers (indicated by *)

[42] *Luo, Y., **Chen, B.**, Yu, S., Bastian, T., Krucker, S., *Astrophys. J.*, 911, 4 (DOI) 2021
"Radio Spectral Imaging of an M8.4 Eruptive Solar Flare: Possible Evidence of a Termination Shock"

[41] **Chen, B.**, Battaglia, M., Krucker, S., Reeves, K., Glesener, L., *Astrophys. J. Lett.*, 908, 55 (DOI) 2021
"Energetic Electron Distribution of the Coronal Acceleration Region: First results from Joint Microwave and Hard X-ray Imaging Spectroscopy"

[40] *Yu, S., **Chen, B.**, Reeves, K., Gary, D., Sophie M. et al., *Astrophys. J.*, 900, 17 (DOI) 2020
"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"
• *CESRA Highlight*: "Magnetic Reconnection during the Post-impulsive Phase of a Long-duration Solar Flare"

[39] **Chen, B.**, Shen, C., Gary, D., Reeves, K., Fleishman, G. et al., *Nature Astronomy*, 4, 1140 (DOI) 2020
"Measurement of magnetic field and relativistic electrons along a solar flare current sheet"
• *Press Releases*: National Science Foundation; New Jersey Institute of Technology; Harvard-Smithsonian Center for Astrophysics; Yunnan Astronomical Observatory
• *Popular Science Stories*: Astronomy Magazine; Europa Press (Spain)

[38] **Chen, B.**, Yu, S., Reeves, K., Gary, D., *Astrophys. J. Lett.*, 895, 50 (DOI) 2020
"Microwave Observations of an Erupting Flux Rope: Implications for the Standard Solar Flare Model in Three Dimensions"
• *CESRA Highlight*: "Microwave Spectral Imaging of an Erupting Magnetic Flux Rope During a Large Solar Flare"

[37] **Chen, B.**, Shen, C., Reeves, K., Guo, F., *Astrophys. J.*, 884, 63 (DOI) 2019
"Radio Spectroscopic Imaging of a Solar Flare Termination Shock: Split-band Feature as Evidence for Shock Compression"
• *RHESSI Nugget*: "Rejuvenating Solar Flare Termination Shocks as Particle Accelerators"
• *CESRA Highlight*: "Split-Band Feature of Solar Flare Termination Shock"

[36] *Yu, S., **Chen, B.**, *Astrophys. J.*, 872, 71 (DOI) 2019
"Possible Detection of Subsecond-Period Propagating Magnetohydrodynamics Waves in Post-Reconnection Magnetic Loops During a Two-Ribbon Flare"
• *RHESSI Nugget*: "Short-Period Waves"
• *CESRA Highlight*: "Short-Period Waves in Flare Loops"

[35] **Chen, B.**, Yu, S., Battaglia, M., Samaiyah, F., Antonia S. et al. *Astrophys. J.*, 866, 62 (DOI) 2018

"Magnetic Reconnection Null Points as the Origin of Semi-relativistic Electron Beams in a Solar Jet"

• *AAS NOVA Highlight*: "Speeding Electrons in a Solar Jet"

[34] *Wang, Z., **Chen, B.**, Gary, D., *Astrophys. J.*, 848, 77 (DOI) 2017

"Dynamic Spectral Imaging of Decimetric Fiber Bursts in an Eruptive Solar Flare"

[33] *Zeng, Z., **Chen, B.**, Ji, H., Goode, P., Cao, W., *Astrophys. J. Lett.*, 819, 3 (DOI) 2016

"Resolving the Fan-Spine Reconnection Geometry of a Small-Scale Chromospheric Jet Event with the New Solar Telescope"

[32] **Chen, B.**, Bastian, T., Shen, C., Gary, D., Krucker, S., Glesener, L., *Science*, 350, 1238 (DOI) 2015

"Particle Acceleration by a Solar Flare Termination Shock"

• *Press Releases*: National Radio Astronomy Observatory; Harvard-Smithsonian Center for Astrophysics; New Jersey Institute of Technology

• *Popular Science Stories*: Scientific American; Daily Mail (UK); Le Scienze (Italy); ABC (AU)

[31] **Chen, B.**, Bastian, T., Gary, D., *Astrophys. J.*, 794, 149 (DOI) 2014

"Direct Evidence of an Eruptive, Filament-Hosting Magnetic Flux Rope Leading to a Fast Coronal Mass Ejection"

[30] **Chen, B.**, Bastian, T., White, S., Gary, D. et al., *Astrophys. J. Lett.*, 763, 21 (DOI) 2013

"Tracing Electron Beams in the Sun's Corona with Radio Dynamic Imaging Spectroscopy"

• *NRAO Science Highlights*: "Imaging Magnetic Reconnection on the Sun"

[29] **Chen, B.**, Bastian, T., *Astrophys. J.*, 750, 35 (DOI) 2012

"The Role of Inverse Compton Scattering in Solar Coronal Hard X-Ray and Gamma-Ray Sources"

[28] **Chen, B.**, Bastian, T., Gary, D., Jing, J., *Astrophys. J.*, 736, 64 (DOI) 2011

"Spatially and Spectrally Resolved Observations of a Zebra Pattern in a Solar Decimetric Radio Burst"

[27] **Chen, B.**, Yan, Y., *Astrophys. J.*, 689, 1412 (DOI) 2008

"Short-Lived Absorptive Type III-like Microwave Bursts as a Signature of Fragmented Electron Injections"

[26] **Chen, B.**, Yan, Y., *Solar Physics*, 246, 431 (DOI) 2007

"On the Origin of the Zebra Pattern with Pulsating Superfine Structures on 21 April 2002"

Referred Publications as Supporting Author

[25] Samanta, T., Tian, H., **Chen, B.**, Reeves, K., Cheung, M. et al., *The Innovations*, in press (DOI) 2021

"Plasma heating induced by tadpole-like downflows in the flaring solar corona"

[24] Jafarzadeh, S., (and 13 authors), including **Chen, B.**, *Philos. Trans. Royal Soc. A*, in press (DOI) 2021

"An Overall View of Temperature Oscillations in the Solar Chromosphere with ALMA"

[23] Chhabra, S., Gary, D., Hallinan, G., Anderson, M., **Chen, B.** et al., *Astrophys. J.*, 906, 132 (DOI) 2021
"Imaging Spectroscopy of CME-Associated Solar Radio Bursts using OVRO-LWA"

[22] Reeves, K., Polito, V., **Chen, B.**, Galan, G., Yu, S., Liu, W., Li, G., *Astrophys. J.*, 905, 165 (DOI) 2020
"Hot Plasma Flows and Oscillations in the Loop-top Region During the September 10 2017 X8.2 Solar Flare"

[21] Kong, X., Guo, F., Shen, C., **Chen, B.** et al., *Astrophys. J. Lett.*, 905, L16 (DOI) 2020
"Dynamical Modulation of Solar Flare Electron Acceleration due to Plasmoid–Shock Interactions in the Looptop Region"

[20] Sharma, R., Battaglia, M., Luo, Y., **Chen, B.**, Yu, S., *Astrophys. J.*, 904, 94 (DOI) 2020
"Radio and X-ray Observations of Short-lived Episodes of Electron Acceleration in a Solar Microflare"

[19] Fleishman, G., Gary, D., **Chen, B.**, Kuroda, N., Yu, S., Nita, G., *Science*, 367, 278 (DOI) 2020
"Decay of the coronal magnetic field can release sufficient energy to power a solar flare"
- NJIT press release; Phys.org article

[18] Kuroda, N., Fleishman, G., Gary, D., Nita, G., **Chen, B.**, Yu, S., *Frontiers*, 7, 22 (DOI) 2020
"Evolution of Flare-Accelerated Electrons Quantified by Spatially Resolved Analysis"

[17] Monica, G., (and 9 authors), including **Chen, B.**, *Solar Physics*, 295, 57 (DOI) 2020
"A Survey of Computational Tools in Solar Physics"

[16] Glesener, L., (and 8 authors), including **Chen, B.**, *Astrophys. J. Lett.*, 891, L34 (DOI) 2020
"Accelerated Electrons Observed Down to <7 keV in a NuSTAR Solar Microflare"

[15] Karlicky, M., **Chen, B.**, Gary, D., Karsparova, J. et al., *Astrophys. J.*, 889, 72 (DOI) 2020
"Drifting Pulsation Structure at the Very Beginning of the 2017 September 10 Limb Flare"

[14] Kong, X., Guo, F., Shen, C., **Chen, B.** et al., *Astrophys. J. Lett.*, 887, L37 (DOI) 2019
"The Acceleration and Confinement of Energetic Electrons by a Termination Shock in a Magnetic Trap: An Explanation for Nonthermal Loop-Top Sources during Solar Flares"

[13] Shen, C., Kong, X., Guo, F., Raymond, J., **Chen, B.**, *Astrophys. J.*, 869, 116 (DOI) 2018
"The Dynamical Behavior of Reconnection-driven Termination Shocks in Solar Flares: Magnetohydrodynamic Simulations"

[12] Polito, V., (and 6 authors), including **Chen, B.**, *Astrophys. J.*, 864, 63 (DOI) 2018
"Broad Non-Gaussian Fe XXIV Line Profiles in the Impulsive Phase of the 2017 September 10 X8.3-class Flare Observed by Hinode/EIS"

[11] Gary, D., **Chen, B.**, Dennis, B., Fleishman, G. et al, *Astrophys. J.*, 863, 83 (DOI) 2018
"Microwave and Hard X-Ray Observations of the 2017 September 10 Solar Limb Flare"
- NJIT press release; AAS/SPD press release; AAS NOVA Highlight

[10] White, S., (and 27 authors), including **Chen, B.**, *Solar Physics*, 292, 88 (DOI) 2017
"Observing the Sun with the ALMA: Fast-Scan Single-Dish Mapping"

[9] Shimojo, M., (and 27 authors), including **Chen, B.**, *Solar Physics*, 292, 87 (DOI) 2017

"Observing the Sun with the ALMA: High-resolution Interferometric Imaging"

[8] Grefenstette, B., (and 23 authors), including **Chen, B.**, *Astrophys. J.*, 826, 20 (DOI) 2016
"The first Focused Hard X-ray Images of the Sun with NuSTAR"

[7] Tian, H., (and 6 authors), including **Chen, B.**, *Astrophys. J. Lett.*, 823, 16 (DOI) 2016
"Global sausage oscillation of flare loops detected by the Interface Region Imaging Spectrograph"

[6] Tian, H., Young P., Reeves, K., **Chen, B.**, et al., *Astrophys. J.*, 811, 139 (DOI) 2015
"Temporal Evolution of Chromospheric Evaporation: Case Studies of the M1.1 Flare on 2014 September 6 and X1.6 Flare on 2014 September 10"

[5] Tian, H., (and 7 authors), including **Chen, B.**, *Astrophys. J. Lett.*, 797, 14 (DOI) 2014
"Imaging and Spectroscopic Observations of Magnetic Reconnection and Chromospheric Evaporation in a Solar Flare"

[4] Yan, Y., Huang, J., **Chen, B.**, Liu, Y., Tan, C., *Adv. in Space Res.*, 46, 413 (DOI) 2010
"Radio Fine Structures in dm-cm Wavelength Range Associated with Magnetic Reconnection Processes"

[3] Chernov, G., Yan, Y., Tan, C., **Chen, B.**, Fu, Q., *Solar Physics*, 262, 149 (DOI) 2010
"Spiky Fine Structures of Type III-Like Radio Bursts in Absorption"

[2] Yan, Y., Huang, J., **Chen, B.**, Sakurai T., *Publ. Astron. Soc. Jpn*, 58, 815 (DOI) 2007
"Diagnostics of Radio Fine Structures around 3 GHz with Hinode Data in the Impulsive Phase of an X3.4/4B Flare Event on 2006 December 13"

Referred Book Chapters

[1] Gary, D., Bastian, T., **Chen, B.** et al., in *Science with a ngVLA (Eds. E. Murphy)* (DOI) 2018
"Radio Observations of Solar Flares"

Non-Refereed Publications or White Papers

[10] Ji, H., (and 108 authors), including **Chen, B.**, *Heliophysics 2050 Science White Papers* (ADS) 2020
"Major Scientific Challenges and Opportunities in Understanding Magnetic Reconnection and Related Explosive Phenomena in Solar and Heliospheric Plasmas"

[9] Gibson, S., (and 18 authors), including **Chen, B.**, *Heliophysics 2050 Science White Papers* (ADS) 2020
"Untangling the Global Coronal Magnetic Field with Multiwavelength Observations"

[8] **Chen, B.**, Bastian, T., Dahlin, J., Drake, J., et al., *Astro2020 Science White Papers* (ADS) 2019
"Probing Magnetic Reconnection in Solar Flares: New Perspectives from Radio Dynamic Imaging Spectroscopy"

[7] Bastian, T., Bradley, R., Bain, H., **Chen, B.**, et al., *Astro2020 APC White Papers* (ADS) 2019
(Astro2020 APC White Papers) "Frequency Agile Solar Radiotelescope"

[6] Bastian, T., **Chen, B.**, Gary, D., Fleishman, G. et al., *Astro2020 Science White Papers* (ADS) 2019
"Radio, Millimeter, Submillimeter Observations of the Quiet Sun"

[5] Fleishman, G., Bastian, T., **Chen, B.**, Gary, D. et al., *Astro2020 Science White Papers* (ADS) 2019
"Solar Coronal Magnetic Fields: Quantitative Measurements at Radio Wavelengths"

[4] Gary, D., Bastian, T., **Chen, B.**, Drake, J. et al., *Astro2020 Science White Papers* (ADS) 2019
"Particle Acceleration and Transport, New Perspectives from Radio, X-ray, and Gamma-Ray Observations"

[3] Bastian, T., Bain, H., **Chen, B.**, Gary, D. et al., *Astro2020 Science White Papers* (ADS) 2019
"Diagnostics of Space Weather Drivers Enabled by Radio Observations"

[2] Bastian, T., (and 20 authors), including **Chen, B.**, *The Messenger*, 171, 25 (ADS) 2018
"Exploring the Sun with ALMA"

[1] Christe, S., (and 39 authors), including **Chen, B.**, *NGSPM White Papers* (ADS) 2017
"Exploring impulsive solar magnetic energy release and particle acceleration with focused hard X-ray imaging spectroscopy"

Invited Talks

[27] Space Science Seminar, NASA Marshall Space Flight Center 04/2021
"Solar Flare Energy Release: New Insights from Broadband Radio Imaging Spectroscopy"

[26] Astronomy & Astrophysics Seminar, Dublin Institute for Advanced Studies 01/2021
"Solar Flare Energy Release: New Insights from Recent Radio Observations"

[25] Plenary Talk, Max-Planck-Princeton Center for Fusion and Astro Plasma Physics Workshop 01/2021
"Probing Magnetic Reconnection in Solar Flares with Radio Spectral Imaging'

[24] Mini-Conference on Magnetic Reconnection, APS Division of Plasma Physics Meeting 11/2020
"Probing Magnetic Reconnection in Solar Flares with Radio Spectral Imaging"

[23] Heliophysics Seminar, Heliophysics Division of NASA Goddard Space Flight Center 10/2020
"Magnetic Reconnection and Particle Acceleration in Solar Flares: New Insights from Recent Radio Studies"

[22] Institute for Space Weather Sciences Colloquium, New Jersey Institute of Technology 10/2020
"Measurement of Magnetic Field and Relativistic Electrons along a Solar Flare Current Sheet"

[21] Space & Plasma Seminar, Dartmouth College 10/2020
"Radio Diagnostics of Magnetic Reconnection and Particle Acceleration in Solar Flares"

[20] Astronomy & Space Science Colloquium, Nanjing University 09/2020
"The Sun as a Laboratory for High-Energy Astrophysics: A Radio Perspective"

[19] Key Laboratory of Solar Activities Seminar Series, Chinese Academy of Sciences 07/2020
"High-Energy Astrophysics on the Sun: New Insights from Broadband Radio Imaging Spectroscopy"

[18] Solar Physics Webinar of Global Reach—SolFER Colloquium 04/2020
"Solar Flare Observations with the Jansky Very Large Array"

[17] SolFER (a Heliophysics DRIVE Science Center) Team Meeting 04/2020

"Onset of Flare Energy Release: Observations"

[16] American Geophysical Union Fall Meeting, San Francisco, CA 12/2019
"Recent Advances in Radio Imaging Spectroscopy for Studying High-Energy Processes on the Sun"

[15] Astrophysics Seminar, American Museum of Natural History 10/2019
"High-Energy Astrophysics on Our Nearest Star: New Insights from Radio Observations"

[14] Space Physics Seminar, Los Alamos National Laboratory 03/2019
"Probing Magnetic Reconnection in Solar Flares"

[13] Heliophysics Seminar, Princeton Plasma Physics Laboratory 03/2019
"Probing Magnetic Reconnection in Solar Flares"

[12] American Geophysical Union Fall Meeting 12/2018
"Radio Dynamic Spectroscopic Imaging: A Powerful New Tool for Studying Electron Acceleration and Transport in Solar Flares"

[11] Space Physics and Astrophysics Colloquium, University of Minnesota 11/2018
"Solar Flare Observations with the Karl G. Jansky Very Large Array"

[10] Radio Stars Workshop, MIT Haystack Observatory 11/2017
"Solar Radio Emission at High Frequencies"

[9] Joint Hinode-11/IRIS-8 Science Meeting, Seattle, WA 05/2017
"Recent Results from Coordinated VLA and Hinode/IRIS Observations"

[8] SHINE Conference, Santa Fe, NM 07/2016
Scene-setting talk for session "Particle Acceleration and Wave Generation Across Scales: From Reconnection to Shocks"

[7] Princeton Astroplasmas Seminar, Princeton University 05/2016
"Particle Acceleration in Solar Flares: New Insights from Radio Observations"

[6] SunDC Workshop, NASA Goddard Space Flight Center 05/2016
"Solar Flare Studies in the New Era of Radio Imaging Spectroscopy"

[5] Physics Department Seminar, New Jersey Institute of Technology 05/2016
"Explosions on the Sun: New Insights from Recent Radio Observations"

[4] 15th Annual International Astrophysics Conference 04/2016
"Particle Acceleration by a Solar Flare Termination Shock"

[3] Space Sciences Laboratory Colloquium, Univ. of California, Berkeley 04/2015
"Solar Radio Astronomy in the Era of Broadband Dynamic Imaging Spectroscopy"

[2] American Geophysics Union Fall Meeting 12/2014
"Constraining Solar Coronal Magnetic Fields with New Radio Observing Techniques"

[1] NAOC Seminar, National Astronomical Observatories, CAS 03/2013
"Passages of Electron Beams in the Sun's Corona"

Contributed Conference Presentations*

* Presentations given by Dr. Chen are listed. Numerous talks for which Dr. Chen is listed as a co-author are not included.

[18] American Geophysical Union Fall Meeting, Online 12/2020
"The Above-the-looptop Source of the 2017 September 10 Solar Flare: Energetic Electron Distribution over a Broad Energy Range"

[17] 236th American Astronomical Society Meeting, Online 06/2020
"Measurement of magnetic field and relativistic electrons along a solar flare current sheet"

[16] 234th American Astronomical Society Meeting, St. Louis, MO 06/2019
"Fast plasma outflows associated with impulsive microwave and hard X-ray bursts during the gradual phase of the 2017 September 10 X8.2 flare"

[15] 234th American Astronomical Society Meeting, St. Louis, MO 06/2019
"Radio Spectroscopic Imaging of Solar Flare Termination Shocks: Split-band Feature and A Second Possible Event"

[14] 18th RHESSI Workshop, Minneapolis, MN 05/2019
"Radio Spectral Imaging of Solar Flare Termination Shock: Co-Spatial Split-band Feature"

[13] American Geophysical Union Fall Meeting, Washington DC 12/2018
"Probing the Bi-Directional Magnetic Reconnection Outflow Region of An Eruptive Solar Flare with Microwave Spectroscopic Imaging"

[12] Triennial Earth-Sun Summit, Leesburg, VA 05/2018
"Microwave Spectroscopic Imaging of the Magnetic Reconnection Region in the 2017 September 10 Eruptive Solar Flare"

[11] American Geophysical Union Fall Meeting, New Orleans, LA 12/2017
"Tracing Fast Electron Beams Emanating from the Magnetic Reconnection Site in a Solar Jet"

[10] 5th US/China Workshop on Radio Astronomy, Charlottesville, VA 07/2017
"Solar Flare Observations with Jansky Very Large Array"

[9] 16th RHESSI Workshop, Boulder, CO 06/2017
"VLA Observation of dm-λ Type III Radio Bursts in a Microflare"

[8] American Astronomical Society Solar Physics Division Meeting, Boulder, CO 06/2016
"Radio Spectroscopic Imaging of Bi-directional Electron Beam Pairs in a Solar Flare"

[7] American Geophysical Union Fall Meeting, San Francisco, CA 12/2015
"Observations and Simulations of a Termination Shock in an Eruptive Solar Flare as a Possible Particle Accelerator"

[6] 14thRHESSI Workshop, Newark, NJ 08/2015
"New Insights into Particle Acceleration: Radio Observations of a Termination Shock"

[5] 223rd American Astronomical Society Meeting, Washington, DC 01/2014
"Probing Magnetic Energy Release in a Solar Flare with Radio Dynamic Imaging Spectroscopy"

[4] American Astronomical Society Solar Physics Division Meeting, Bozeman, MT 07/2013
"Radio and X-ray Diagnostics of Energy Release in Solar Flares"

[3] American Geophysical Union Fall Meeting, San Francisco, CA 12/2011
"The Role of Inversion Compton Scattering in Coronal HXR Sources"

[2] American Astronomical Society Solar Physics Division Meeting, Boulder, CO 06/2009
"Interplanetary Type II Radio Bursts and the Role of Gyrosynchrontron Radiation"

[1] Annual Meeting of the Chinese Astronomical Society, Guangzhou, China 11/2007
"Possible Interpretations for Two Superfine Structures in Solar Microwave Bursts"

Selected Outreach Activities

Public Lecture Series, Amateur Astronomers Association of Princeton, Princeton, NJ, USA 01/2020
"Eyeing the Sun: Our Nearest Star"

61st Annual Dinner Lecture, Rockland Astronomy Club, Rockland, NY, USA 03/2019
"Eyeing the Sun: Our Nearest Star"

EOVSA observation of the 2017 Total Solar Eclipse 08/2017
NJIT press release; media coverage by Phys.org, Space Daily, etc.

BBSO observation of the 2016 Transit of Mercury 05/2016
NJIT press release; media coverage by Space.com, Yahoo.com, Washington Post, Universe Today, The Telegraph, etc.

Public Lecture at the Leander McCormick Observatory, University of Virginia 08/2012
"The Sun: Our Nearest Star"