Xinfeng Xu

Center for Interdisciplinary Exploration and Research in Astrophysics (CIERA),
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Highlights

Research Expertise: Bridging the local and high-redshift universe by examining the stellar and gas properties of galaxies and near AGNs, using UV, optical, and IR spectra in combination with theoretical models and simulations.

- Observations probe the feedback caused by stars and AGNs on galaxy environments, by measuring the properties of massive stars, escaped ionizing photons, and galactic/AGN outflows, through resonantly scattered emission, interstellar medium absorption, and nebular emission lines.
- Using models of stars, gas, and dust to investigate galaxy evolution, with a focus on understanding the spectral energy distribution, spatially distributed properties of galactic/AGN outflows, interactions within the multiphase interstellar medium, and galaxy's contribution to cosmic reionization.

Accomplishments: 13 first-author, **36** co-author journal publications, **1500+** citations. **6** PI proposals (including **1** from **JWST** and **1** from **HST**), **20+** co-I proposals. Granted **$352,062** as the Science PI (detailed below).

Appointments

CIERA Postdoctoral Fellow *2023 – present*
Northwestern University, Evanston, IL

Postdoctoral Associate *2020 – 2023*
Johns Hopkins University, Baltimore, MD
Advisors: Prof. Tim Heckman (JHU), Dr. Alaina Henry (STScI)

Education

Ph.D. in Physics, Virginia Tech *2014 – 2020*

- Advisor: Prof. Nahum Arav
- Thesis: *How Do Quasars Impact Their Host Galaxies? Quasar Outflows Studies in Absorption and Emission*

M.S. in Computer Science (double degree), Virginia Tech *2016 - 2019*

- Advisor: Prof. B. Aditya Prakash
- Thesis: *Modeling and Predicting Incidence using Deep Learning*

Honors & Awards

CIERA Fellow, Northwestern University *2023*
Kavli Fellow, Kavli Institute for the Physics and Math. of the Univ., Kashiwa, Japan *declined, 2023*
STScI Director Research Fund, Space Telescope Science Institute *2022*
Excellent Master Thesis Award, Virginia Tech *2019*
Graduate Student Scholarship, Virginia Tech *2017*

Principal Investigator Grants

Space Telescope Science Institute, JWST GO 5293, $226,745 *2025 – 2027*
Galactic Winds in the Early Universe: observing outflows in emission and absorption in a typical $z \sim 6$ galaxy

Space Telescope Science Institute, HST GO 17042, $125,317 *2023 – 2025*
Are Galactic Outflows Seen in Absorption and Emission Lines Tracing the Same Gas?

Principal Investigator Telescope Proposals

Ground-based telescopes typically do not award funding in addition to the observing time needed to conduct the proposed science, but current "market rate" for purchasing time on these facilities is ***∼ $50 − $100k per night****.*

Keck Observatory, 2024A *0.5 night*
Local to Cosmic Noon: Are Galactic Outflows Seen in Absorption and Emission Lines Tracing the Same Gas?

Keck Observatory, 2023B *0.5 night*
Local to Cosmic Noon: Are Galactic Outflows Seen in Absorption and Emission Lines Tracing the Same Gas?

Gemini Observatory, 2022B *6 hrs*
First-ever Mapping [O III] Outflows in a Broad Absorption Line Quasar with Strong AGN Feedback

Michigan-Dartmouth-MIT Observatory, 2021 *2 nights*
Unusual Balmer Decrements in Local Starburst Galaxies: Incorrect Calibration or New Astrophysics?

Scientific Leadership Roles

The COS Legacy Archive Spectroscopic SurveY (CLASSY), project leader
CLASSY is an HST large treasury program (135 new + 177 archival orbits) with an international team of 45 experts to build a far-UV atlas of 45 star-forming galaxies & deliver high-level data products to the community. I led the studies of galactic outflow and feedback effects and published two first-author papers.

Low-z Lyman Continuum Survey (LzLCS), project leader
LzLCS is an HST large program (134 orbits) to statistically study the escape of ionizing Lyman continuum (LyC) radiation in 66 low-redshift star-forming galaxies. I led the studies of connecting Mg II resonant emission lines to the escaped LyC and Lyα radiations and published one first-author paper.

Subaru Prime Focus Spectrograph (PFS), member
The PFS Galaxy Evolution Survey will observe 250,000+ distant galaxies over ∼120 nights, the largest sample of such galaxies to date. I participate in the key aspects of the survey design, definition of the science case, and upcoming spectroscopic data analyses (starting in Spring 2025). I'm also the core team member of the Subaru-Roman Synergistic Galaxy Survey (link), which aims to follow-up Roman's survey fields with 100 nights by Subaru to create a large imaging and spectroscopic database.

Habitable Worlds Observatory (HWO), Ionizing Photons sub-working group member
HWO is NASA's next generation large infrared+optical+ultraviolet space telescope, recommended by the 2020 Decadal Survey. I led the science case development document entitled "Spatially Resolving the Fundamental Elements of Reionization in Galaxies" to promote UV IFU instruments on HWO.

Mentoring

Graduate Student:

- Tiffany Liou, Northwestern (current)

Undergraduate student:

- Caroline Baccus, Northwestern/REACH program (current)
- Yijun Song, Virginia Tech (2019 - 2020), now a graduate student at Purdue University
- Collier Sean, Virginia Tech (2018 - 2019), now assistant research professor (in Acoustics) at PSU
- Sean Heston, Virginia Tech (2018 - 2019), now a PhD student at VT
- Jake Pighini, Emory and Henry College, VT REU student (2018), now a data scientist at Group W

Community Service

Scientific Service

- James Webb Space Telescope (JWST) Time Allocation Committee, Panel Support Scientist *2023*
- Hubble Space Telescope (HST), Time Allocation Committee, external panelist *2022, 2023*
- Gemini Telescope, Fast Turnaround Time Allocation Committee, external panelist *2021, 2022*
- UV Galaxies Conference at Iceland, Organizing committee member and session chair *2023*
- Large Volume Spectroscopic Analysis Conference at JWST Era, Organizing committee member *2022*

Academic Service

- CIERA Research Experience For Undergraduates (REU) selection committee, member *2024*
- CIERA Journal Club, organizer *2024*
- Johns Hopkins University/Space Telescope Science Institute Astrocoffee, organizer *2021 - 2023*
- Peer reviewer for The Astrophysical Journal (ApJ), Monthly Notices of the Royal Astronomical Society (MNRAS) *2020 - now*

Social Impact and Inclusion+ Service

- CIERA Equity, Diversity, and Inclusion Communication and Visibility Action Team, member *2024*

Teaching

Lecture: including course design, material preparations, class involvements, and assessment.

- *"Introduction to Modern Astronomical Telescopes"*, undergraduate class at Johns Hopkins *2023*

Guest Lecture: including material preparations and class involvements

- *"Advanced Topics in Astrophysics: Galaxy Formation and Evolution"*, graduate class at Northwestern *2024*
- *"Introduction to Cosmology"*, CIERA REACH program class at Northwestern *2024*

Scientistic Talks

Invited Talks:

- Massachusetts Institute of Technology, seminar *Feb 2024*
- University of Science and Technology of China, seminar *Jul 2023*
- UV Galaxies Conference at Iceland *Jul 2023*
- Princeton University, seminar *Mar 2022*
- Johns Hopkins University/Space Telescope Science Institute, astrocoffee *Sep 2021*
- Johns Hopkins University/Space Telescope Science Institute, joint seminar *Feb 2021*
- Space Telescope Science Institute, Joint Seminar *Jun 2020*
- York University, seminar *Sep 2019*
- Virginia Tech, seminar *Apr 2018*

Contributed Conference Talks:

- *"Winds throughout the Universe"* at Joint Space-Science Institute (JSI) *Oct 2023*
- *"241st American Astronomical Society (AAS) Meeting" at Seattle* *Jan 2023*
- *"LymanRAS: The production and escape of Lyman photons through time and space"*, virtual *Jan 2022*
- *"SAZERAC: Early Galaxy Formation Near and Far: Preparing for a Journey with JWST"*, virtual *Dec 2021*
- *"Galactic and AGN Wind Workshop"* at Baltimore *Aug 2021*
- *"233st American Astronomical Society (AAS) Meeting" at Seattle* *Jan 2019*
- *"231st American Astronomical Society (AAS) Meeting" at Washington D.C.* *Jan 2018*
- *"AGN Winds Conference on the Georgia Coast"* *Jun 2017*

Selected Press Releases

All based on research from my journal publications.

@ESA, Webb captures star clusters in Cosmic Gems arc *2024*

@Astronomy.com, New CLASSY atlas provides clues about galaxy evolution *2022*

@NASA, Quasar Tsunamis Rip Across Galaxies *2020*

@VT news, Discover quasar tsunamis capable of preventing stars from forming *2020*

Co-Investigator Proposals

Listing accepted open-access observatory proposals that I served as a Co-I. Depending on the projects, I participates in proposal preparation, data analysis, and/or discussing and writing scientific publications.

JWST Cycle 3 (22.65 hrs; PI: Vanzella, Eros) *2024*
Mapping Star Cluster Feedback in a Galaxy 500 Myr after the Big Bang

JWST Cycle 2 (23.99 hrs; PI: Mingozzi, Matilde) *2023*
Tracing molecular gas in nearby metal-poor systems: the keys to unlocking star-formation in the early universe

JWST Cycle 2 (10.06 hrs; PI: Bradley, Larry) *2023*
Unveiling the Most Distant Lensed Arc at $z \sim 10$

JWST Cycle 2 (16.14 hrs; PI: Abdurro'uf) *2023*
Physical Properties of a Possible Galaxy Merger at z=10.2

JWST Cycle 1 (74.3 hrs; PI: Kassin, Susan) *2021*
A Pathfinder for JWST Spectroscopy: Deep High Spectral Resolution Maps of Galaxies over $1 < z < 6$

HST Cycle 31, AR Legacy (PI: Henry, Alaina) *2023*
Galactic Winds Unveiled: Leveraging Cloud Simulations with Radiative Transfer to Constrain Feedback

HST Cycle 31 (5 orbits; PI: Roy, Namrata) *2023*
Dissecting Red geyser winds: low luminosity AGNs with large scale outflows in the ionized phase

HST Cycle 31, AR (PI: Arav, Nahum) *2023*
Quasar outflows in the HST/UV archive: Measuring major contributors to AGN feedback

HST Cycle 30 (119 orbits; PI: Hayes, Matthew) *2022*
The Lyman-alpha and Continuum Origins Survey (LaCOS)

HST Cycle 30 (49 orbits; PI: Leclercq, Floriane) *2022*
Resolving Lyman Alpha emission in a complete sample of Lyman Continuum leakers and non-leakers

HST Cycle 30 (12 orbits; PI: Heckman, Timothy) *2022*
Are There Two Classes of Lyman-Leaky Galaxies?

HST Cycle 29, AR (PI: Carr, Cody) *2021*
Modeling the Mg II-Lyman Alpha Relation as a Calibrator of the Lyman Continuum Escape Fraction

HST Cycle 29, AR (PI: Arav, Nahum) *2021*
Measuring the contribution of quasar outflows to AGN feedback

HST Cycle 29, AR (PI: Arav, Nahum) *2021*
A new paradigm for Seyfert outflows and their connection to AGN feedback

HST Cycle 29 (12 orbits; PI: James, Bethan) *2021*
[C II], a High-z Diagnostic Diamond in the Rough

HST Cycle 29 (14 orbits; PI: Hayes, Matthew) *2021*
The ionizing output of galaxies undergoing the most extreme feedback

HST Cycle 27, AR (PI: Arav, Nahum) *2019*
Are quasar outflows a major contributor to AGN feedback? HST/COS to the rescue

HST Cycle 24, AR (PI: Arav, Nahum) *2016*
The COS revolution of AGN outflow science

HST Cycle 24 (20 orbits; PI: Arav, Nahum) *2016*
Deciphering quasar outflows and measuring their contribution to AGN feedback

VLA/21B (160.17 hrs; PI: Borthakur, Sanchayeeta) *2021*
Characterizing Radio Continuum Emission from Low-z Lyman Continuum Leakers

Keck (2 nights; PI: Jaskot, Anne) *2020*
The Nebular Properties of Lyman Continuum Emitters: Deep Spectroscopy for the HST Low-Redshift Lyman Continuum Survey

Publications as First Authors

13. **Xu, Xinfeng**; Henry, Alaina; Heckman, Timothy; Carr, Cody; et al.
Shining a Light on the Connections between Galactic Outflows Seen in Absorption and Emission Lines
Submitted to The Astrophysical Journal, 2024arXiv240919776X

12. **Xu, Xinfeng**; Heckman, Tim; Yoshida, Michitoshi; Ohyama, Youichi; Henry, Alaina
What are the Radial Distributions of Density, Outflow Rates, and Cloud Structures in the M 82 Wind?
The Astrophysical Journal, 2023ApJ...956..142X

11. **Xu, Xinfeng**; Henry, Alaina; Heckman, Tim; Marques-Chaves, Rui; et al.
The Low-Redshift Lyman Continuum Survey: Optically Thin and Thick Mg II Lines as Probes of Lyman Continuum Escape
The Astrophysical Journal, 2023ApJ...943...94X

10. **Xu, Xinfeng**; Heckman, Tim; Henry, Alaina; Berg, Danielle A.; et al.
CLASSY VI: The Density, Structure and Size of Absorption-Line Outflows in Starburst Galaxies
The Astrophysical Journal, 2023ApJ...948...28X

9. **Xu, Xinfeng**; Henry, Alaina; Heckman, Tim; Chisholm, John et al.
Tracing Lyα and Lyman Continuum Escape in Galaxies by Mg II Emission
The Astrophysical Journal, 2022ApJ..933...202. (2022b)

8. **Xu, Xinfeng**; Heckman, Tim; Henry, Alaina; Berg, Danielle A.; Chisholm, John; James, Bethan L.; Martin, Crystal L.; Stark, Daniel P. and the CLASSY Team;
The COS Legacy Archive Spectroscopy SurveY (CLASSY) III: The Properties of Starburst-Driven Warm Ionized Outflows
The Astrophysical Journal, 2022ApJ...933..222X (2022a)

7. **Xu, Xinfeng**; Arav, Nahum; Miller, Timothy; Korista, Kirk T.; Benn, Chris;
Physical Conditions of Iron-peak Low-ionization Lines in the FeLoBAL Quasar Q0059-2735
Monthly Notices of the Royal Astronomical Society, 2021MNRAS.506.2725X.

6. **Xu, Xinfeng**; Zakamska, Nadia L.; Arav, Nahum; Miller, Timothy; Benn, Chris;
Evidence that Emission and Absorption Outflows in Quasars Are Related
Monthly Notices of the Royal Astronomical Society, 2020MNRAS.495..305X.

5. **Xu, Xinfeng**; Arav, Nahum; Miller, Timothy; Kriss G. A.; Plesha, R.;
HST/COS observations of quasar outflows in the 500 – 1050Å rest-frame, II: The Most Energetic Quasar Outflow
The Astrophysical Journal Supplement, 2020ApJS..247...38X.

4. **Xu, Xinfeng**; Arav, Nahum; Miller, Timothy; Kriss G. A.; Plesha, R.;
HST/COS observations of quasar outflows in the 500 – 1050Å rest-frame, IV: The Largest Broad Absorption Line Acceleration
The Astrophysical Journal Supplement, 2020ApJS..247...40X

3. **Xu, Xinfeng**; Arav, Nahum; Miller, Timothy; Kriss G. A.; Plesha, R.;
HST/COS observations of quasar outflows in the 500 – 1050Å rest-frame, VI: Wide, Energetic Outflows in SDSS J0755+2306
The Astrophysical Journal Supplement, 2020ApJS..247...42X

2. **Xu, Xinfeng**; Arav, Nahum; Miller, Timothy; Benn, Chris
VLT/X-Shooter Survey of BAL Quasars: Large Distance Scale and AGN Feedback
The Astrophysical Journal, 2019ApJ...876..105X.

1. **Xu, Xinfeng**; Arav, Nahum; Miller, Timothy; Benn, Chris
A Mini-BAL Outflow at 900 pc from the Central Source: VLT/X-shooter Observations
The Astrophysical Journal, 2018ApJ...858...39X

Other Publications

38. Li, Zhihui; Gronke, Max; Heckman, Timothy; **Xu, Xinfeng**; et al.
Synergistic Radiative Transfer Modeling of Mg II and Lyα Emission in Multiphase, Clumpy Galactic Environments: Application to Low-Redshift Lyman Continuum Leakers
Submitted to The Astrophysical Journal, 2024arXiv241011152L

37. Roy, Namrata; Heckman, Timothy; Henry, Alaina; Chisholm, John; et al.
Lyman Continuum leakage from massive leaky starbursts: A different class of emitters?
Submitted to The Astrophysical Journal, 2024arXiv241013254R

36. Hsiao, Tiger Yu-Yang; Álvarez-Márquez, Javier; Coe, Dan; et al.
JWST MIRI Detections of Hα and [O III] and a Direct Metallicity Measurement of the z = 10.17 Lensed Galaxy MACS0647-JD
The Astrophysical Journal, 2024ApJ...973...81H

35. Carr, Cody A.; Cen, Renyue; Scarlata, Claudia; **Xu, Xinfeng**; et al.
The Effect of Radiation and Supernovae Feedback on LyC Escape in Local Star-forming Galaxies
Accepted to The Astrophysical Journal, 2024arXiv240905180C

34. Flury, Sophia R.; Jaskot, Anne E.; Saldana-Lopez, Alberto; et al.
The Low-Redshift Lyman Continuum Survey: The Roles of Stellar Feedback and ISM Geometry in LyC Escape
Accepted to The Astrophysical Journal, 2024arXiv240912118F

33. Huberty, M.; Carr, C.; Scarlata, C.; Heckman, T.; Henry, A.; Xu, X.; et al.
CLASSY X: Highlighting Differences Between Partial Covering and Semi-Analytic Modeling in the Estimate of Galactic Outflow Properties
Accepted to The Astrophysical Journal, 2024arXiv240603646H

32. Jaskot, Anne E.; Silveyra, Anneliese C.; Plantinga, Anna; et al.
Multivariate Predictors of LyC Escape II: Predicting LyC Escape Fractions for High-Redshift Galaxies
The Astrophysical Journal, 2024ApJ...973..111J

31. Jaskot, Anne E.; Silveyra, Anneliese C.; Plantinga, Anna; et al.
Multivariate Predictors of Lyman Continuum Escape. I. A Survival Analysis of the Low-redshift Lyman Continuum Survey
The Astrophysical Journal, 2024ApJ...972...92J

30. Leclercq, Floriane; Chisholm, John; King, Wichahpi; et al.
Linking Mg II and [O II] spatial distribution to ionizing photon escape in confirmed LyC leakers and non-leakers
Astronomy & Astrophysics, 2024A&A...687A..73L

29. Adamo, Angela; Bradley, Larry D.; Vanzella, Eros; et al.
Bound star clusters observed in a lensed galaxy 460 Myr after the Big Bang
Nature, June 2024

28. Hu, Weida; Martin, Crystal L.; Gronke, Max; Gazagnes, Simon et al.
CLASSY VII Lyα Profiles: The Structure and Kinematics of Neutral Gas and Implications for LyC Escape in Reionization-era Analogs
The Astrophysical Journal, 2023ApJ...956...39H

27. Gazagnes, Simon; Mauerhofer, Valentin; Berg, Danielle A. et al.
Interpreting the Si II and C II Line Spectra from the COS Legacy Archive Spectroscopic SurveY Using a Virtual Galaxy from a High-resolution Radiation-hydrodynamic Simulation
The Astrophysical Journal, 2023ApJ...952..164G

26. Mingozzi, Matilde; James, Bethan L.; Berg, Danielle A.; Arellano-Córdova, Karla Z.; et al.
CLASSY VIII: Exploring the Source of Ionization with UV ISM diagnostics in local High- z Analogs
The Astrophysical Journal, 2024ApJ...962...95M

25. Hsiao, Tiger Yu-Yang; Abdurro'uf; Coe, Dan; Larson, Rebecca L.; Jung, Intae; Mingozzi, Matilde; et al.
JWST NIRSpec spectroscopy of the triply-lensed $z = 10.17$ galaxy MACS0647−JD
The Astrophysical Journal, 2024ApJ...973....8H

24. Fudamoto, Yoshinobu; Inoue, Akio K.; Coe, Dan; Welch, Brian; Acebron, Ana; Ricotti, Massimo; Mandelker, Nir; Windhorst, Rogier A.; **Xu, Xinfeng**; et al.
The Extended [CII] under Construction? Observation of the brightest high-z lensed star-forming galaxy at z = 6.2
The Astrophysical Journal, 2024ApJ...961...71F

23. Abdurro'uf; Coe, Dan; Jung, Intae; Ferguson, Henry; Brammer, Gabriel; et al.
Spatially Resolved Stellar Populations of $0.3 < z < 6.0$ Galaxies in WHL 0137-08 and MACS 0647+70 Clusters as Revealed by JWST: How Do Galaxies Grow and Quench over Cosmic Time?
The Astrophysical Journal, 2023ApJ...945..117A

22. Mingozzi, Matilde; James, Bethan L.; Arellano-Córdova, Karla Z.; Berg, Danielle A.; et al.
CLASSY IV: Exploring UV diagnostics of the interstellar medium in local high- z analogs at the dawn of the JWST era
The Astrophysical Journal, 2022ApJ...939..110M

21. Arellano-Córdova, Karla Z.; Mingozzi, Matilde; Berg, Danielle A.; et al.
CLASSY V: The Impact of Aperture Effects on the Inferred Nebular Properties of Local Star-forming Galaxies
The Astrophysical Journal, 2022ApJ...935...74A

20. Chisholm, J.; Saldana-Lopez, A.; Flury, S.; Schaerer, D.; Jaskot, A. et al.
The Far-Ultraviolet Continuum Slope as a Lyman Continuum Escape Estimator at High-redshift
Monthly Notices of the Royal Astronomical Society, 2022MNRAS.517.5104C

19. Marques-Chaves, R.; Schaerer, D.; Amorín, R. O.; Atek, H.; Borthakur, S.; et al.
No correlation of the Lyman continuum escape fraction with spectral hardness
Astronomy & Astrophysics, 2022AA...663L...1M

18. James, Bethan L.; Berg, Danielle A.; King, Teagan; and the CLASSY Team
CLASSY-II: A technical Overview of the COS Legacy Archive Spectroscopic SurveY
The Astrophysical Journal Supplement, 2022ApJS..262...37J

17. Berg, Danielle A.; James, Bethan L.; King, Teagan; McDonald, Meaghan; Chisholm, John; Heckman, Timothy; Martin, Crystal L.; Stark, Dan P. and the CLASSY Team
The COS Legacy Archive Spectroscopy SurveY (CLASSY) Treasury Atlas
The Astrophysical Journal Supplement, 2022ApJS..261...31B

16. Saldana-Lopez, Alberto; Schaerer, Daniel; Chisholm, John; Flury, Sophia R.; Jaskot, Anne E. et al.
The Low-Redshift Lyman Continuum Survey: Unveiling the ISM properties of low-z Lyman continuum emitters
Astronomy & Astrophysics, 2022AA...663A..59S

15. Flury, Sophia R.; Jaskot, Anne E.; Ferguson, Harry C.; Worseck, Gábor; et al.
The Low-redshift Lyman Continuum Survey. II. New Insights into LyC Diagnostics
The Astrophysical Journal, 2022ApJ...930..126F

14. Flury, Sophia R.; Jaskot, Anne E.; Ferguson, Harry; Worseck, Gabor; Makan, Karill; et al.
The Low-redshift Lyman Continuum Survey. I. New, Diverse Local Lyman Continuum Emitters
The Astrophysical Journal, 2022ApJS..260....1F

13. Wang, Bingjie; Heckman, Timothy M., Ricardo, Amorin; Sanchayeeta, Borthakur; Chisholm, John et al.
The Low-redshift Lyman-continuum Survey: [S II] Deficiency and the Leakage of Ionizing Radiation
The Astrophysical Journal, 2021ApJ...916....3W.

12. Miller, Timothy; Arav, Nahum; **Xu, Xinfeng**; Kriss G. A.;
The contribution of quasar absorption outflows to AGN feedback
Monthly Notices of the Royal Astronomical Society, 2020MNRAS.499.1522M

11. Zeilig-Hess, Meir; Levinson, Amir; **Xu, Xinfeng**; Arav, Nahum;
BALQSO Spectra Explained by Shock Disruption of Galactic Clouds
Monthly Notices of the Royal Astronomical Society, 2020MNRAS.491.4325Z.

10. Miller, Timothy; Arav, Nahum; **Xu, Xinfeng**; Kriss G. A.; Plesha, R.;
HST/COS Observations of Quasar Outflows in the Extreme UV, III: Four Similar and Energetic Outflows in 2MASS J1051+1247 Likely Contributing to AGN Feedback
The Astrophysical Journal Supplement, 2020ApJS..247...39M

9. Miller, Timothy; Arav, Nahum; **Xu, Xinfeng**; Kriss G. A.; Plesha, R.;
HST/COS Observations of Quasar Outflows in the Extreme UV, V: Two Outflows in PKS J0352-0711: Distances, Energetics, and AGN Feedback
The Astrophysical Journal Supplement, 2020ApJS..247...41M

8. Miller, Timothy; Arav, Nahum; **Xu, Xinfeng**; Kriss G. A.; Plesha, R.;
HST/COS Observations of Quasar Outflows in the 500-1050Å Rest Frame. VII. Distances and Energetics for 11 Outflows in Five Quasars
The Astrophysical Journal Supplement, 2020ApJS..249...15M

7. Arav, Nahum; **Xu, Xinfeng**; Kriss G. A. et al. (HST/COS collaboration, 21 co-authors)
Multi-wavelength campaign on NGC 7469, V. Analysis of the HST/COS observations: Super solar metalicity, distance, and trough variation models
Astronomy & Astrophysics, 2020A&A...633A..61A

6. Arav, Nahum; **Xu, Xinfeng**; Miller, Timothy; Kriss G. A.; Plesha, R.;
HST/COS observations of quasar outflows in the 500 – 1050Å rest-frame, I: The Most Energetic Quasar Outflows In The Universe And Other Discoveries
The Astrophysical Journal Supplement, 2020ApJS..247...37A

5. Kriss G. A. et al. (HST/COS, XMM-Newton and NuSTAR collaborations, 27 co-authors)
HST/COS observations of the newly discovered obscuring outflow in NGC 3783
Astronomy & Astrophysics, 2019A&A...621A..12k

4. Adhikari, Bijaya; **Xu, Xinfeng**; Ramakrishnan, Naren; Prakash, B. Aditya;
EpiDeep: Exploiting Embeddings for Epidemic Forecasting
Participated in U.S. national Centers for Disease Control and Prevention (CDC) flu challenge, 2017 – 2018
Published in Proceedings of the 25th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Pages 577-586, 2019

3. Chen, Liangzhe; **Xu, Xinfeng**; Lee, Sangkeun; Duan, Sisi; Tarditi, Alfonso G.; Chinthavali, Supriya; Prakash, B. Aditya;
HotSpots: Failure Cascades on Heterogeneous Critical Infrastructure Networks
Collaborated with Oak Ridge National Laboratory (ORNL), US
Published in Proceedings of the Conference on Information and Knowledge Management (CIKM), Pages 1599-1607, 2017

2. Miller, Timothy R.; Arav, Nahum; **Xu, Xinfeng**; Kriss, Gerard A.; Plesha, Rachel J.; Benn, Chris; Liu, Guilin
Distance, Energy, and Variability of Quasar Outflows: Two HST/COS Epochs of LBQS 1206+1052
The Astrophysical Journal, 2018ApJ...865...90M

1. Arav, Nahum; Liu, Guilin; **Xu, Xinfeng**; Stidham, James; Benn, Chris; Chamberlain, Carter
Evidence that 50% of BALQSO Outflows Are Situated at Least 100 pc from the Central Source
The Astrophysical Journal, 2018ApJ...857...60