

JOHN J. RUAN

Curriculum Vitae

Bishop's University
Department of Physics & Astronomy
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+1-(514)-463-5414 (Canada)
+1-(917)-536-5880 (U.S.)

Personal	Citizenship: Canada & United States dual-citizen	
Research Interests	<i>Multi-messenger gravitational wave astrophysics</i> : kilonova astrophysics, <i>r</i> -process nucleosynthesis, radiative transfer simulations, binary supermassive black holes, machine learning & Bayesian inference <i>Black hole accretion</i> : active galactic nuclei variability & accretion state transitions	
Employment	ASSOCIATE PROFESSOR OF PHYSICS & ASTRONOMY ASSISTANT PROFESSOR OF PHYSICS & ASTRONOMY Bishop's University, Sherbrooke, Québec, Canada	2022 – present 2020 – 2022
	MCGILL SPACE INSTITUTE & TROTTIER CHAIR POSTDOCTORAL FELLOW McGill Space Institute & McGill University, Montréal, Québec, Canada	2017 – 2020
	GRADUATE RESEARCH & TEACHING ASSISTANT University of Washington, Seattle, WA, USA	2010 – 2017
Education	PH.D. IN ASTRONOMY M.S. IN ASTRONOMY University of Washington, Seattle, WA, USA	2017 2011
	B.A. IN ASTROPHYSICS Columbia University, New York, NY, USA	2010
Honors & Fellowships	CANADA RESEARCH CHAIR (TIER II) IN MULTI-MESSENGER ASTROPHYSICS BISHOP'S UNIVERSITY EMERGING SCHOLAR AWARD DAN DAVID PRIZE SCHOLAR – DAN DAVID FOUNDATION <i>International honor for 'outstanding scientific achievement and future promise in astronomy'</i> . MCGILL SPACE INSTITUTE & TROTTIER CHAIR POSTDOCTORAL FELLOWSHIPS	2021 – present 2023 2017 2017 – 2020
Grants & Space-Based Telescope Programs Led as PI	<i>PI or Lead-author of 10 competitive research grants worth a total of \$470K USD + \$1.14M CAD</i> [10] CANADIAN RUBIN OBSERVATORY CONSORTIUM PARTNERSHIP Support for Canadian Rubin PIs for access to Rubin data (\$112K CAD) [9] QUÉBEC RESEARCH FUND (FRQNT) New Researchers Grant (PI: J. J. Ruan , \$75K CAD) [8] NATURAL SCIENCES & ENGINEERING RESEARCH COUNCIL OF CANADA (NSERC) Discovery Grant & Launch Supplement (PI: J. J. Ruan , \$158K CAD) [7] CANADA FOUNDATION FOR INNOVATION (CFI) EVANS LEADERS FUND & QUÉBEC MINISTÈRE DE L'ÉCONOMIE ET DE L'INNOVATION (PI: J. J. Ruan , \$177K CAD) [6] CANADA RESEARCH CHAIR (TIER II) IN MULTI-MESSENGER ASTROPHYSICS (PI: J. J. Ruan , \$500K + 100K CAD for first-time awardees) [5] NASA CHANDRA X-RAY OBSERVATORY CYCLE 21 Chandra/Hubble Guest Observer program (PI: J. J. Ruan , 64ks + 4orbits, \$51K USD) [4] NASA CHANDRA X-RAY OBSERVATORY CYCLE 19 Guest Observer program (PI: J. J. Ruan , 124ks, \$113K USD) [3] NATIONAL SCIENCE FOUNDATION ASTRONOMY & ASTROPHYSICS GRANT (Proposal Lead Author: J. J. Ruan , PI: S. Anderson, \$184K USD)	 2023 – 2026 2021 – 2024 2021 – 2026 2021 2021 – 2026 2020 2017 2017 – 2020

	[2] NASA CHANDRA X-RAY OBSERVATORY CYCLE 18 Guest Observer program (PI: J. J. Ruan , 69ks, \$67K USD)	2016
	[1] NASA FERMI GAMMA-RAY TELESCOPE CYCLE 7 Guest Investigator program (PI: J. J. Ruan), \$55K USD)	2014
Ground- Based Telescope Programs Led as PI	[8] CANADA-FRANCE-HAWAII TELESCOPE 2022B/2023A/2023B, Multi-semester target-of-opportunity program, 9 hours (PI: J. J. Ruan)	2022 – 2023
	[7] CANADA-FRANCE-HAWAII TELESCOPE 2020A, Target-of-opportunity program, 14 hours (PI: J. J. Ruan)	2020
	[6] CANADA-FRANCE-HAWAII TELESCOPE 2019B, Target-of-opportunity program, 40 hours (PI: J. J. Ruan)	2019
	[5] JANSKY VERY LARGE ARRAY 2019A, Director’s discretionary time program, 2 hours (PI: J. J. Ruan)	2019
	[4] CANADA-FRANCE-HAWAII TELESCOPE TARGET-OF-OPPORTUNITY PROGRAM, 12 HOURS (PI: J. J. Ruan)	2019
	[3] JANSKY VERY LARGE ARRAY TELESCOPE 2019A 14 hours (PI: J. J. Ruan)	2019
	[2] GEMINI-NORTH TELESCOPE 2017B 4 hours (PI: J. J. Ruan)	2017
	[1] ASTROPHYSICAL RESEARCH CONSORTIUM 3.5M TELESCOPE >30 half-nights (PI: J. J. Ruan)	2013 – 2020
Other Grants & Proposals as co-I	NASA LISA PREPARATORY SCIENCE PROGRAM Grant (PI: J. Runnoe)	2023
	ESTRIE HIGHER EDUCATION HUB (PRESE) Outreach Project Grant (PI: L. Nelson)	2023
	GEMINI OBSERVATORY 2022B Program (PI: N. Ford)	2023
	GEMINI OBSERVATORY 2018B – 2022A ToO Programs (PI: M. Drout)	2018 - 2023
	MCDONALD INSTITUTE Novel Collaborations Grant (PI: D. Haggard & T. Brunner)	2020
	NASA SWIFT TELESCOPE Cycle 16 Program (PI: P. Charlton)	2020
	CHANDRA X-RAY OBSERVATORY Cycle 19, 20, & 21 ToO Program (PI: P. Green)	2017 - 2020
	CHANDRA X-RAY OBSERVATORY Cycle 20 & 21 GO Program (PI: D. Haggard)	2019 - 2020
	CHANDRA X-RAY OBSERVATORY CYCLE 20 ToO PROGRAM (PI: D. Haggard)	2019
	HUBBLE SPACE TELESCOPE Cycle 24 Guest Observer (PI: M. Eracleous)	2016
	CHANDRA X-RAY OBSERVATORY CYCLE 18 ToO PROGRAM (PI: P. Green)	2016
	XMM-NEWTON X-RAY TELESCOPE CYCLE 16 GO PROGRAM (PI: A. Merloni)	2016
	XMM-NEWTON X-RAY TELESCOPE CYCLE 14 GO PROGRAM (PI: P. Green)	2014
CHANDRA X-RAY OBSERVATORY CYCLE 15 ARCHIVAL PROGRAM (PI: P. Green)	2013	
Research Supervision	<i>Supervised or co-supervised a total of 1 postdoctoral fellow, 6 graduate students, and 6 undergraduate students on projects of my design:</i>	
	<u>Undergraduate Students</u>	
	Olivier Gilbert (current Université Laval BSc student)	2023 – present
	Jaeden Bardati (Bishop’s BSc → PhD at Caltech)	2021 – 2023
	<ul style="list-style-type: none"> • <i>Bardati, Ruan, et al., 2023, The Astrophysical Journal in press, arXiv:2308.03828</i> • <i>Bardati, Ruan, et al., 2024, submitted to The Astrophysical Journal</i> 	
	Virginia Rufina Marquez-Pacheco (current Bishop’s BSc student)	2021 – 2022
	Katie Savard (co-supervised McGill BSc → MSc at Cambridge, PhD at Oxford)	2019 – 2021
	<ul style="list-style-type: none"> • <i>Savard, Ruan, et al., 2022, Monthly Notices of the Royal Astron. Society, 509, 4620</i> 	

	Marie-Jöelle Gringas (co-supervised McGill BSc → MSc, PhD at U of Waterloo)	2017 – 2018
	Joseph Hountalas (co-supervised McGill BSc)	2017 – 2018
	<u>Master's Students</u>	
	Patrick Horlaville (current Bishop's MSc student)	2023 – present
	Élodie Lescure (current Bishop's MSc student, NSERC CGS-M)	2022 – present
	Nicole Ford (co-supervised McGill MSc → PhD at McGill)	2021 – 2023
	<ul style="list-style-type: none"> • Ford, Ruan, et al., 2023, <i>The Astrophysical Journal in press</i>, arXiv:2308.15657 	
	Samuel Gagnon-Hartman (Bishop's MSc, NSERC CGS-M → PhD at SNS Pisa)	2020 – 2022
	<ul style="list-style-type: none"> • Gagnon-Hartman, Ruan, et al., 2023, <i>Monthly Notices of the Royal Astron. Society</i>, 520, 1 	
	Nicholas Vieira (co-supervised McGill MSc → PhD at McGill)	2019 – 2021
	<ul style="list-style-type: none"> • Vieira, Ruan, et al., 2020, <i>The Astrophysical Journal</i>, 895, 96 	
	Xiangyu Jin (co-supervised McGill MSc → PhD at U of Arizona)	2018 – 2020
	<ul style="list-style-type: none"> • Jin, Ruan, et al., 2021, <i>The Astrophysical Journal</i>, 912, 20 	
	<u>Doctoral Students</u>	
	Nicholas Vieira (current co-supervised McGill PhD student, NSERC PGS-D)	2021 – present
	<ul style="list-style-type: none"> • Vieira, Ruan, et al., 2023, <i>The Astrophysical Journal</i>, 944, 123 • Vieira, Ruan, et al., 2024, <i>The Astrophysical Journal in press</i>, arXiv:2308.16796 	
	Paul Charlton (co-supervised McGill PhD student → tech industry)	2017 – 2020
	<ul style="list-style-type: none"> • Charlton, Ruan, et al., 2019, <i>The Astrophysical Journal</i>, 876, 75 	
	<u>Postdoctoral Researchers</u>	
	Weixiang Yu (current Canadian Rubin Observatory Postdoctoral Fellow at Bishop's)	2023 – present
	PRE-MAP RESEARCH MENTOR	2011 – 2014
	Mentored 4 undergraduates from U. of Washington's research mentorship program for underrepresented students on astronomy research projects.	
Teaching Experience	LEAD INSTRUCTOR (BISHOP'S UNIVERSITY)	2020 – present
	Taught Introduction to Physics: Electricity & Magnetism (PHY192/194), Introduction to Astronomy (PHY113), Astronomy & Astrophysics (PHY214), Cosmology (PHY474/574)	
	LECTURER (MCGILL UNIVERSITY)	2017
	One of 5 postdocs that jointly lead a grad-level course on astrophysical transients.	
	GUEST LECTURER (MCGILL UNIVERSITY)	2017 – 2018
	Guest lectured for 4 undergraduate- and graduate-level courses in physics.	
	TEACHING ASSISTANT (UNIVERSITY OF WASHINGTON)	2010 – 2017
	Designed and led lab sections for 7 introductory undergraduate astronomy courses.	
	TEACHING ASSISTANT (UNIVERSITY OF WASHINGTON)	2013 – 2016
	Led telescope observing runs for 3 undergraduate observational astronomy courses.	
	GUEST LECTURER (UNIVERSITY OF WASHINGTON)	2014 – 2017
	Guest lectured for 5 undergraduate-level courses in astronomy.	
Service to Research Community	CANADIAN ASTRONOMICAL SOCIETY OPTICAL/IR REVIEW COMMITTEE MEMBER	2023 – present
	CANADIAN SPACE AGENCY & CANADIAN ASTRONOMICAL SOCIETY JOINT COMMITTEE FOR SPACE ASTRONOMY MEMBER	2021 – present
	CANADIAN TIME ALLOCATION COMMITTEE, EXTRAGALACTIC PANEL MEMBER	2020 – present
	CENTRE DE RECHERCHE EN ASTROPHYSIQUE DU QUÉBEC EQUITY, DIVERSITY, & INCLUSION COMMITTEE MEMBER	2021 – present

	SCIENTIFIC ORGANIZING COMMITTEE MEMBER FOR CANADIAN LASER INTERFEROMETER SPACE ANTENNA WORKSHOPS	2021 & 2022
	CHANDRA X-RAY OBSERVATORY TIME ALLOCATIONS COMMITTEE MEMBER	2020
	NUSTAR OBSERVATORY TIME ALLOCATIONS COMMITTEE MEMBER	2020
	CANADIAN MULTI-MESSENGER ASTROPHYSICS WORKSHOP SCIENTIFIC ORGANIZING COMMITTEE MEMBER	2020
	LAS CUMBRES OBSERVATORY TIME ALLOCATIONS COMMITTEE	2018
	CASTOR TELESCOPE AGN & TIME-DOMAIN SCIENCE WORKING GROUPS	2018 – present
	MAUNAKEA SPECTROSCOPIC EXPLORER TIME-DOMAIN WORKING GROUP	2018 – present
	APACHE POINT OBSERVATORY UW TIME ALLOCATIONS COMMITTEE	2013 – 2016
	JOURNAL PEER REVIEWER: APJ, APJL, MNRAS, NATURE ASTRONOMY	2013 – present
Service to University	BISHOP'S UNIVERSITY SENATE SCIENCE SENATOR	2023 – present
	BISHOP'S ABPU FACULTY UNION STRIKE SERVICES COMMITTEE MEMBER	2023 – present
	BISHOP'S UNIVERSITY JURY OF STAFF AWARD COMMITTEE MEMBER	2021 – present
	BISHOP'S UNIVERSITY PARKING COMMITTEE MEMBER	2022 – present
	BISHOP'S ASTROPHYSICS PhD PROGRAM DEVELOPMENT COMMITTEE MEMBER	2022 – present
	BISHOP'S UNIVERSITY SCIENCE STRATEGIC PLAN TASK FORCE MEMBER	2021
	MCGILL SPACE INSTITUTE SUMMER UNDERGRAD PROFESSIONAL DEVELOPMENT SEMINARS ORGANIZER	2018 – 2020
	MCGILL SPACE INSTITUTE ASTROPHYSICS SEMINAR COMMITTEE MEMBER	2017 – 2020
	MCGILL PHYSICS POSTDOCS PROFESSIONAL DEVELOPMENT WORKSHOPS CO-ORGANIZER	2018
	UNIVERSITY OF WASHINGTON GRADUATE REPRESENTATIVE TO ASTRONOMY UNDERGRADUATES	2012 – 2015
Invited Talks	[19] COLLOQUIUM, UNIVERSITY OF WASHINGTON (Seattle, WA)	2024
	[18] COLLOQUIUM, UNIVERSITY OF BRITISH COLUMBIA (Vancouver, BC)	2024
	[17] CONFERENCE, UNIVERSITÉ DE SHERBROOKE SCIENCE CONFERENCE (Sherbrooke, QC)	2024
	[16] SEMINAR, UNIVERSITÉ DE MONTRÉAL (Montréal, QC)	2023
	[15] WORKSHOP, MULTI-WAVELENGTH FOLLOW-UP OF FAST RADIO BURSTS (Toronto, ON)	2023
	[14] COLLOQUIUM, UNIVERSITY OF ALBERTA (virtual)	2022
	[13] SEMINAR TALK, YORK UNIVERSITY (virtual)	2020
	[12] SEMINAR TALK, TRENT UNIVERSITY (Peterborough, ON)	2020
	[11] SEMINAR TALK, BISHOP'S UNIVERSITY (Sherbrooke, QC)	2019
	[10] CONFERENCE, GRAVITATIONAL WAVES OUTSIDE THE BOXES (Waterloo, ON)	2019
	[9] WORKSHOP, CANADIAN ASTRONOMY LONG RANGE PLAN TOWNHALL (Edmonton, AB)	2019
	[8] CONFERENCE, PANDA SYMPOSIUM ON TIME-DOMAIN ASTRONOMY (Chengdu, China)	2018
	[7] SEMINAR TALK, MCGILL SPACE INSTITUTE (Montréal, QC)	2017
	[6] COLLOQUIUM, UNIVERSITÉ DE MONTRÉAL (Montréal, QC)	2017
	[5] CONFERENCE, THE PHYSICS OF EXTREME AGN VARIABILITY (US Virgin Islands)	2017
	[4] SEMINAR TALK, HARVARD-SMITHSONIAN CFA (Cambridge, MA)	2016
	[3] SEMINAR TALK, UC BERKELEY (Berkeley, CA)	2016
	[2] CONFERENCE PLENARY TALK, SDSS-IV COLLAB. MEETING 2016 (Madison, WI)	2016
	[1] CONFERENCE PLENARY TALK, SDSS-IV COLLAB. MEETING 2015 (Madrid, Spain)	2015

Other Talks	SEMINAR TALK, BISHOP'S UNIVERSITY (Sherbrooke, QC)	2023
	SEMINAR TALK, VANDERBILT UNIVERSITY (Nashville, TN)	2022
	WORKSHOP TALK, STATUS OF THE r -PROCESS AFTER LIGO/VIRGO O3 (Seattle, WA)	2022
	WORKSHOP TALK, CANADIAN LISA WORKSHOP (virtual)	2022
	WORKSHOP TALK, CANADIAN MULTI-MESSENGER WORKSHOP (Montréal, QC)	2020
	CONFERENCE TALK, QUASARS IN CRISIS (Edinburgh, UK)	2019
	CONFERENCE TALK, 50TH CANADIAN ASTRONOMICAL SOCIETY (Montréal, QC)	2019
	HIGH-ENERGY ASTRO SEMINAR TALK, MIT KAVLI INSTITUTE (Cambridge, MA)	2019
	QUASAR TEA SEMINAR TALK, HARVARD-SMITHSONIAN CFA (Cambridge, MA)	2019
	CONFERENCE TALK, 233TH AMERICAN ASTRONOMICAL SOCIETY (Seattle, WA)	2019
	WORKSHOP TALK, TIME-DOMAIN SPECTROSCOPIC SURVEY MEETING (Cambridge, MA)	2018
	CONFERENCE TALK, 49TH CANADIAN ASTRONOMICAL SOCIETY (Victoria, BC)	2018
	SEMINAR TALK, UNIVERSITY OF MICHIGAN (Ann Arbor, MI)	2018
	WORKSHOP TALK, TIME-DOMAIN SPECTROSCOPIC SURVEY MEETING (Seattle, WA)	2017
	SEMINAR TALK, CARNEGIE OBSERVATORIES (Pasadena, CA)	2016
	CONFERENCE TALK, NORTHWEST ASTRONOMY MEETING (Bellingham, WA)	2016
	CONFERENCE TALK, 227TH AMERICAN ASTRONOMICAL SOCIETY (Kissimmee, FL)	2016
	CONFERENCE TALK, 225TH AMERICAN ASTRONOMICAL SOCIETY (Seattle, WA)	2015
	CONFERENCE TALK, 2SDSS-III BOSS COLLABORATION MEETING 2013 (Berkeley, CA)	2013
Public Outreach	BISHOP'S UNIVERSITY 2024 ECLIPSE PLANNING COMMITTEE LEAD ORGANIZER	2022 – present
	MCGILL ASTRONOMY PUBLIC OUTREACH STEERING COMMITTEE MEMBER	2018 – 2020
	ASTROMCGILL MONTHLY PUBLIC LECTURE SERIES CO-ORGANIZER	2018 – 2020
	ASTRONOMY ON TAP - MONTRÉAL CO-ORGANIZER	2017 – 2018
	SEATTLE ASTRONOMY ON TAP SPEAKER	2015
	ISSAQUAH SCHOOL DISTRICT STEM CAREER FAIR PRESENTER	2015
	UNIVERSITY OF WASHINGTON ASTRONOMY OPEN HOUSE PRESENTER	2010 – 2012
	UNIVERSITY OF WASHINGTON PLANETARIUM PRESENTER	2010 – 2014
	EDUCATIONAL VOLUNTEER, AMERICAN MUSEUM OF NATURAL HISTORY	2007– 2008
OUTREACH ASSISTANT, COLUMBIA ASTRONOMY OUTREACH PROGRAM	2007– 2010	
Media Coverage	The Sherbrooke Record: “Bishop's Grad Accepted to PhD Physics Program at Caltech” (May 2023)	
	The Sherbrooke Record: “Total Solar Eclipse Set to Hit Eastern Townships” (Apr. 2023)	
	CBC News: “The Townships are the Best Place to Watch a Total Solar Eclipse” (Apr. 2023)	
	American Astronomical Society Nova: “Comparing Black Holes Large and Small” (Feb. 2020)	
	Quanta Magazine: “Galactic Beacons Get Snuffed Out in a Cosmic Eyeblink” (Nov. 2018)	
	Newsweek: “NS Merger Keeps Glowing, and Scientists Can't Explain Why” (Jan. 2018)	
	McGill Press Release: “Neutron-Star Merger Yields New Puzzle for Astrophysicists” (Jan. 2018)	
	McGill Press Release: “Gravitational-Wave Detection Opens new Era for Astronomy” (Oct. 2017)	
	<i>Science</i> News: “The Quasar that Switched off the Light” (Jan. 2016)	
	Scientific American: “The Case of the Disappearing Quasars” (Nov. 2015)	
Sky and Telescope: “The Case of the Missing Quasar” (Jan. 2016)		
UW Today: “Quiet Quasar has Apparently Eaten Its Fill” (Jan. 2016)		

Workshops	INSTITUTE FOR NUCLEAR THEORY WORKSHOP ON R-PROCESS NUCLEOSYNTHESIS	2022
& Schools	WHERE THE EARTH MEETS THE SKY STATISTICS & MACHINE-LEARNING WORKSHOP	2021
	CANADA-FRANCE-HAWAII TELESCOPE USER'S MEETING	2019
	THE FUTURE OF CANADIAN SPACE ASTRONOMY WORKSHOP	2018
	LARGE SYNOPTIC SURVEY TELESCOPE COMMUNITY WORKSHOP	2015
	ASTRODATA HACK WEEK	2014
	LA SERENA SCHOOL FOR DATA SCIENCE: APPLIED TOOLS FOR ASTRONOMY	2014
	JSSI WORKSHOP: PUTTING ACCRETION THEORY TO THE TEST	2013
	GAIA/LSST ASTRO-VISUALIZATION WORKSHOP	2012
	NCSI WORKSHOP: INTRODUCTION TO PARALLEL AND CLUSTER COMPUTING	2011

1st-Author & Student-led Refereed Publications *I have published 44 total refereed papers with >10,000 total citations (h-index of 27), including 18 refereed papers as lead-author or that were led by students under my direct supervision.*
**indicates papers led by students under my direct supervision.*

[18] SPECTROSCOPIC r -PROCESS ABUNDANCE RETRIEVAL FOR KILONOVAE II: LANTHANIDES IN THE INFERRED ABUNDANCE PATTERNS OF MULTI-COMPONENT EJECTA FROM THE GW170817 KILONOVA
 *N. Vieira, **J. J. Ruan**, D. Haggard, *N. Ford, et al., 2023, The Astrophysical Journal in press, arXiv:2308.16796

[17] SIGNATURES OF MASSIVE BLACK HOLE MERGER HOST GALAXIES FROM COSMOLOGICAL SIMULATIONS I: UNIQUE GALAXY MORPHOLOGIES IN IMAGING
 *J. Bardati, **J. J. Ruan**, et al., 2023, The Astrophysical Journal in press, arXiv:2308.03828

[16] KILONOVAE: EXPLORING KILONOVA SPECTRAL FEATURES WITH AUTOENCODERS
 *N. Ford, *N. Vieira, **J. J. Ruan**, et al., 2023, The Astrophysical Journal in press, arXiv:2308.15657

[15] SPECTROSCOPIC r -PROCESS ABUNDANCE RETRIEVAL FOR KILONOVAE I: THE INFERRED ABUNDANCE PATTERN OF EARLY EMISSION FROM GW170817
 *N. Vieira, **J. J. Ruan**, D. Haggard, *N. Ford, et al., 2023, The Astrophysical Journal, 944, 123

[14] DEBIASING STANDARD SIREN INFERENCE OF THE HUBBLE CONSTANT WITH NEURAL RATIO ESTIMATION
 *S. Gagnon-Hartman, **J. J. Ruan**, D. Haggard, 2023, Monthly Notices of the Royal Astronomical Society, 520, 1

[13] ARE BLAZARS ABOVE THE BLAZAR SEQUENCE A SIGNIFICANT SOURCE OF ICECUBE NEUTRINOS?
 *K. Savard, **J. J. Ruan**, D. Haggard, 2022, Monthly Notices of the Royal Astronomical Society, 509, 4620

[12] PROBING THE DISK-CORONA SYSTEMS AND BROAD LINE REGIONS OF CHANGING-LOOK QUASARS WITH X-RAY AND OPTICAL OBSERVATIONS
 *X. Jin, **J. J. Ruan**, D. Haggard, et al., 2021, The Astrophysical Journal, 912, 20

[11] A DEEP CFHT OPTICAL IMAGING SEARCH FOR A KILONOVA COUNTERPART TO THE POSSIBLE NEUTRON STAR – BLACK HOLE MERGER GW190814
 *N. Vieira, **J. J. Ruan**, D. Haggard, M. R. Drout, et al., 2020, The Astrophysical Journal, 895, 96

[10] THE ANALOGOUS STRUCTURE OF ACCRETION FLOWS IN SUPERMASSIVE AND STELLAR MASS BLACK HOLES: NEW INSIGHTS FROM FADED CHANGING-LOOK QUASARS
J. J. Ruan, S. F. Anderson, M. Eracleous, P. J. Green, D. Haggard, C. L. MacLeod, J. C. Runnoe, M. A. Sobolewska, 2019, The Astrophysical Journal, 883, 76

[9] GEMINI IMAGING OF THE HOST GALAXIES OF CHANGING LOOK QUASARS
 *P. J. L. Charlton, **J. J. Ruan**, D. Haggard, S. F. Anderson, M. Eracleous, P. J. Green, D. Haggard, C. L. MacLeod, J. C. Runnoe, 2019, The Astrophysical Journal, 876, 75

[8] BRIGHTENING X-RAY EMISSION FROM GW170817/GRB170817A: FURTHER EVIDENCE FOR AN OUTFLOW
J. J. Ruan, M. Nynka, D. Haggard, V. Kalogera, P. Evans, 2018, The Astrophysical Journal Letters, 853, L4

[7] TOWARDS AN UNDERSTANDING OF CHANGING-LOOK QUASARS: AN ARCHIVAL SPECTROSCOPIC SEARCH IN SDSS
J. J. Ruan, S. F. Anderson, S. L. Cales, M. Eracleous, P. J. Green, D. Haggard, E. Morganson, J. C. Runnoe, Y. Shen, T. D. Wilkinson, et al., 2016, The Astrophysical Journal, 826, 188

[6] THE TIME-DOMAIN SPECTROSCOPIC SURVEY: UNDERSTANDING THE OPTICALLY VARIABLE SKY WITH SEQUELS IN SDSS-III

- J. J. Ruan**, S. F. Anderson, P. J. Green, E. Morganson, M. Eracleous, A. D. Myers, et al., 2016, *The Astrophysical Journal*, 825, 137
- [5] DETECTION OF QUASAR FEEDBACK FROM THE THERMAL SUNYAEV-ZEL'DOVICH EFFECT IN PLANCK
J. J. Ruan, M. McQuinn, S. F. Anderson, 2015, *The Astrophysical Journal*, 802, 135
- [4] THE NATURE OF TRANSITION BLAZARS
J. J. Ruan, S. F. Anderson, R. M. Plotkin, W. N. Brandt, T. H. Burnett, A. D. Myers, D. P. Schneider, 2014, *The Astrophysical Journal*, 797, 19
- [3] EVIDENCE FOR LARGE TEMPERATURE FLUCTUATIONS IN QUASAR ACCRETION DISKS FROM SPECTRAL VARIABILITY
J. J. Ruan, S. F. Anderson, E. Agol, J. Dexter, 2014, *The Astrophysical Journal*, 783, 105
- [2] THE OBSERVABLE THERMAL AND KINETIC SUNYAEV-ZEL'DOVICH EFFECT IN MERGING GALAXY CLUSTERS
J. J. Ruan, T. R. Quinn, A. Babul, 2013, *Monthly Notices of the Royal Astron. Society*, 432, 3508
- [1] CHARACTERIZING THE OPTICAL VARIABILITY OF BRIGHT BLAZARS: VARIABILITY-BASED SELECTION OF FERMI ACTIVE GALACTIC NUCLEI
J. J. Ruan, S. F. Anderson, C. L. MacLeod, A. C. Becker, T. H. Burnett, J. R. A. Davenport, Z. Ivezić, C. S. Kochanek, R. M. Plotkin, B. Sesar, S. J. Scott, 2012, *The Astrophysical Journal*, 760, 51
- Other Refereed Publications**
- [26] PROBING THE ORIGIN OF CHANGING-LOOK QUASAR TRANSITIONS WITH CHANDRA
Q. Yang, P. J. Green, C. L. MacLeod, R. M. Plotkin et al., including **J. J. Ruan**, 2023, *The Astrophysical Journal*, 953, 61
- [25] THE TIME-DOMAIN SPECTROSCOPIC SURVEY: CHANGING-LOOK QUASAR CANDIDATES FROM MULTI-EPOCH SPECTROSCOPY IN SDSS-IV
P. J. Green, L. Pulgarin-Duque, S. F. Anderson, C. L. MacLeod, M. Eracleous, **J. J. Ruan**, J. Runnoe, et al., 2022, *The Astrophysical Journal*, 933, 180
- [24] THE TIME-DOMAIN SPECTROSCOPIC SURVEY: RADIAL VELOCITY VARIABILITY IN DWARF CARBON STARS
B. R. Roulston, P. J. Green, **J. J. Ruan**, C. L. MacLeod, S. F. Anderson, C. Badenes, J. R. Brownstein, D. P. Schneider, K. G. Stassun, 2019, *The Astrophysical Journal*, 877, 44
- [23] RADIO VARIABILITY FROM A QUIESCENT BLACK HOLE JET
R. M. Plotkin et al. including **J. J. Ruan**, 2019, *The Astrophysical Journal*, 874, 13
- [22] CHANGING-LOOK QUASAR CANDIDATES: FIRST RESULTS FROM FOLLOW-UP SPECTROSCOPY
C. L. MacLeod et al. including **J. J. Ruan**, 2019, *The Astrophysical Journal*, 874, 8
- [21] X-RAY AND MULTI-EPOCH OPTICAL/UV INVESTIGATIONS OF BAL TO NON-BAL QUASAR TRANSFORMATIONS
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