

**RESUME – DR. STEFI BAUM,
1/4/18**

Dr. Stefi Alison Baum
Dean, Faculty of Science
Professor, Dept. of Physics and Astronomy
University of Manitoba
Winnipeg, MB, Canada

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EDUCATION

B.A. Physics, cum laude June 1980 Harvard University, Cambridge, MA
Co-Captain Varsity Women's Lacrosse and Co-Captain Varsity Women's Soccer

PhD Astronomy Dec 1987 University of Maryland, College Park, MD

POST-DEGREE EDUCATION

Center for Higher Education Research and Development

- The Senior University Administrators Course, Niagara-on-the-Lake, 2015

University of Wisconsin-Madison, Fluno Center, Executive Education, 2013

- Fundraising and Development for Nonprofits

Harvard University, Graduate School of Education, 2012

- Performance Assessment in Higher Education

Peabody Fellow, Vanderbilt Peabody Professional Institute, 2011

- Higher Education Management

Pardee RAND Graduate School, 2009, New Security Challenges

Harvard-MIT-Tufts Program on Negotiation, Executive Ed Series, 2007

- Program on Negotiation for Senior Executives
- Dealing with Difficult People and Difficult Situations

American Council on Education, 2005, Chairing the Academic Department

MIT-Sloan Executive Series, 2002, 2003, 2005:

- System Dynamics for Senior Managers
- Managing Technical Professionals and Organizations
- The Innovative Organization

United States Foreign Service Institute, 2004, Global Issues

Coursera Courses Completed - 2013

- Leading Innovative Change in Organizations, Vanderbilt University
- Synapses, Neurons and Brains, Hebrew University of Jerusalem
- What a Plant Knows, Tel Aviv University, (audit)
- Epigenetic Control of Gene Expression, University of Melbourne, (audit)
- A Brief History of Humankind, Hebrew University (audit)
- Surviving Disruptive Technologies, University of Maryland, (audit)

EXPERTISE

Over 25 years of leadership in highly interdisciplinary research and educational environments, including higher education, not for profits, and government agencies. Expertise working at the interfaces of science and engineering, as well as the arts, and public policy. Dedicated to disciplinary and interdisciplinary, pure and applied, cutting edge, grant and industry funded faculty research that informs faculty-mentored, student-driven learning in and out of the classroom. Direct experience with university pedagogy in engineering, science, creativity and innovation, including distance learning, K-12 STEM and STEAM education, and public outreach. Active in programs to recruit and retain women and minorities in STEM. Frequent speaker on the topic of women in STEM. Extensive experience with faculty and staff hiring, mentoring, review and promotion. Dedicated to shared governance and active participation of faculty, staff, and students in idea generation and informed decision-making. Passionate about innovating improved educational approaches to enhance student learning, skill sets, and capability through experimentation coupled with assessment-based evaluation. Accomplished at grant writing, fund raising, and industry collaboration. Strong leadership, administrative, team building, collaborative and communication skills.

Personal research expertise in astrophysics specializing in understanding the origin and nature of galaxies, clusters of galaxies, and the black holes at their centers. Personal research expertise in imaging science including the development and deployment of astronomical instrumentation and missions, and the development of calibration and analysis approaches and algorithms for brain imaging. Over 500 scientific papers, over 230 of them in the refereed journal literature published, 29 PhD and masters students and numerous undergraduate and high school students mentored. Work in last 15 years supported by over 20 Million dollars in external grants.

Volunteer Work (occasional): Habitat for Humanity, Lacrosse Coach

Languages: English –native language; Dutch – moderate proficiency; French – limited

Security Clearance - US Top Secret (currently inactive)

Short Biography: Dr. Stefi Baum

Dr. Stefi Baum joined the University of Manitoba as Dean of the Faculty of Science and Professor of Physics and Astronomy in October 2014. The Faculty of Science serves over 5000 students at the undergraduate and graduate levels. Dr. Baum has been actively engaged on Campus since her arrival, serving on the Program Sustainability, Strategic Enrollment Planning, University Budget Planning, International College of Manitoba, SmartPark Research and Technology Park Board as well as the Senate Committee on Academic Computing, the Senate Committee on Admissions, and the Academic Senate. She is a member of the UM Budget Redesign Committee.

From 2004-2014, Dr. Baum served as Xerox Endowed Professor and Director and School Head of the Chester F. Carlson Center for Imaging Science. The Carlson Center for Imaging Science is a highly interdisciplinary University Research and Education Center, dedicated to pushing the frontiers of imaging in all its forms and uses, with

research programs in remote sensing, sensor and detector development, algorithm development, vision and perception, astrophysical science and technology, biomedical imaging, print science and engineering, document reconstruction and color science.

Dr. Baum joined RIT after serving one and a half years as an American Institute of Physics Science Diplomacy Fellow at the U.S. Department of State where she worked to promote agricultural biotechnology in developed and developing countries. Before that she spent 13 years at the Space Telescope Science Institute (STScI) located at the Homewood Campus of Johns Hopkins University in Baltimore. STScI is the science operations center for the Hubble Space Telescope and the next generation space telescope, the James Webb Space Telescope (JWST). While at STScI, Dr. Baum was most recently the Head of the Engineering and Software Services Division where she led up to 140 scientists, engineers, and computer scientists responsible for the development and maintenance work for the science ground systems of HST and JWST. Earlier, she led the science operations center's development and deployment of a major astronomical instrument, the Space Telescope Imaging Spectrograph. Prior to that, she served as lead scientist on the development of the Hubble Space Telescope archive, the first fully functional pipeline and on-line archive for astronomical data.

Dr. Baum earned a BA in physics with honors from Harvard University and a PhD in astronomy from the University of Maryland. Her personal research focuses in two main areas: (i) the study of activity in galaxies and its relation to galaxy and cluster evolution and (ii) the development of calibration, image processing and statistical algorithms applied to brain imaging for the diagnosis and treatment of mental health conditions. She has published over 500 scientific papers, 220 of them in the referred journal literature; including over two dozen undergraduate student coauthors as well as numerous graduate student and postdoc coauthors in the past five years. Dr. Baum is also active in the development of new astrophysics telescope and mission concepts.

Dr. Baum is deeply engaged in the development of innovative STEM K-12, undergraduate and graduate pedagogy and educational programs, with a focus on interdisciplinary approaches that merge science, engineering, design, and innovation. She is passionate about the power of professor-mentored student-driven project oriented learning in a rich research environment. Dr. Baum is committed to the engagement of diverse populations, youth, industry, and the public in life-long learning with a focus in science, technology, engineering, and mathematics.

PROFESSIONAL TIMELINE

Timeline	Professional Career	Academic Career
10/14 - ongoing	Dean, Faculty of Science, University of Manitoba	Professor, Physics and Astronomy
9/11 – 7/12	Elizabeth S. and Richard M. Cashin Fellow, Radcliffe Institute for Advanced Study	Sabbatical @ Harvard University
7/04 – 11/14	Director and School Head, Chester F. Carlson Center for Imaging Science, Rochester Institute of Technology	Full Professor, RIT, (Endowed Xerox Chair 2007-2011).

11/02-6/04	Senior Science/Diplomacy Fellow, <i>US Dept. of State & American Institute of Physics Diplomacy Fellow Program</i>	leave of absence from Space Telescope Science Institute (STScI)
9/02 - ongoing		Co-I NIRCAM James Webb Space Telescope
10/02		Promoted to Full Astronomer, Space Telescope Science Institute (<i>STScI</i>)
11/99 – 10/02	Division Head, Engineering & Software Services Division, <i>STScI</i>	
9/99 -11/99	Deputy, Science and Engineering Support Division, <i>STScI</i>	
1/99 - 9/99		Sabbatical @ <i>Princeton Univ.</i>
2/96 -12/98	Branch Chief, Spectrographs Team, <i>STScI</i>	Awarded tenure 1997 <i>STScI</i>
1/95 – 2/96	Space Telescope Imaging Spectrograph Scientist, Servicing Mission Office, <i>STScI</i>	
10/91 - 1/95	Archive Scientist, <i>STScI</i>	Promoted to Associate Astronomer 1994 <i>STScI</i>
9/90-10/91	John Hopkins University	Hubble Postdoctoral Fellow, <i>Johns Hopkins University</i>
9/87-9/90	Netherlands Foundation for Research in Astronomy, Dwingeloo, NL	Postdoctoral Research Fellow, <i>Netherlands Foundation for Research in Astronomy</i>

Addresses for Employment History

- Faculty of Science, University of Manitoba, Winnipeg, MB, R3T 2N2, Canada.
- Carlson Center for Imaging Science, College of Science, *Rochester Institute of Technology*, 54 Lomb Memorial Drive, Rochester NY 14623
- Office of Agriculture, Biotechnology & Trade Policy, Economics & Business Bureau, *US Dept. of State*, 2201 C Street NW, Washington DC 20520
- *Space Telescope Science Institute*, 3700 San Martin Dr., Baltimore, MD 21218
- *Johns Hopkins University*, Department of Physics and Astronomy, Bloomberg Center, Homewood Campus, Baltimore, MD 21218
- *Netherlands Foundation for Research in Astronomy*, P. O. Box 2, 7990 AA Dwingeloo, NL

BOARD EXPERIENCE

- Pacific Institute of Mathematical Sciences, Canada, active, Chair of the PIMS Governance and Nomination Subcommittee of the Board.
- Triumf, Canada's National Laboratory for Nuclear and Particles Physics, active,
- Chair of the Board, ACURA, The Associate of Canadian Universities for Research in Astronomy, active

- Board of Governors, Great Lakes Research Consortium (term completed)
- Board Member, Rochester Regional Optics, Photonics and Imaging Accelerator Consortium, Rochester, NY (term completed)
- Trustee, Universities Space Research Association (USRA), six years, (term completed), including serving as member of the USRA Board Compensation and Strategic Planning Committees, member of USRA Homeland and National Security Committee.
- VP, Board of Directors, Society for Imaging Science and Technology (term completed)

FELLOWSHIPS AND AWARDS

- American Association for the Advancement of Science (AAAS) Fellow, 2018
- Girl Scouts of Western New York Woman of Distinction Award, 2011
- Harvard University; Radcliffe Institute of Advanced Study Bunting Fellow, 2011
- Vanderbilt Peabody College of Education & Human Development, Summer Fellow, 2011
- University of Maryland, Outstanding Alumnus, Astronomy Department, 2010
- RIT Million Dollar (Grant) Club, 2005
- American Institute of Physics, US State Department Fellowship 2002/2003
- STScI Individual Achievement Award, for Management and Leadership (2002)
- Rolex Achievement Award (1999), given annually to one female and one male college lacrosse player for career achievements supporting society.
- NASA Excellence Award, Hubble Space Telescope Servicing Mission 3A (1999)
- STScI Individual and Group Achievement Award, Space Telescope Imaging Spectrograph Team, (1996)
- STScI Group Achievement Award, Data Quality Project (1996)
- STScI Individual and Group Achievement Award, Archive Development/Deployment (1993)
- Annie Jump Cannon Award, awarded annually by the American Astronomical Society to a young female astronomer for Scientific Excellence and Promise (1993)
- Hubble Fellowship, original class of Fellows (1990)
- Junior Research Fellowship, National Radio Astronomy Observatory (1985)

EXTERNAL GRANT SUPPORT

Grants totaling ~20 Million (as CoI or PI or SI) in past 15 years, covering science and engineering research, education program development, institutional change, faculty recruitment, and STEM K12 Education and Outreach. Among my successful grants are:

- NSERC Discovery Grant, 2017, PI
- CFI Grant, CoI, Unlocking the Radio Sky with Next-Generation Survey Astronomy, total \$ amount \$9,405,834
- NY State Foundation for Science Technology and Innovation Faculty Development Grant, PI - \$729,000, Sensor Development

- Scientific Research Grants from NSF, NASA, NIH, and DOE, totaling ~3.5 Million, as PI and Co-I, including grants in the fields of astrophysics, instrumentation, and biomedical imaging.
- NSF Professional Masters Grant, PI, “Science Master’s Program: Decision Support Technologies for Environmental Forecasting and Disaster Response”, ~\$660,000
- An NSF Advance (Increasing the Participation and Advancement of Women In Academic Science and Engineering Careers) Grant, “Creating Opportunity Networks for Engagement and Collective Transformation”, ~\$3.2 Million, Senior Personnel and Executive Committee Member,
- New NSF Research Experiences for Undergraduates Grant, PI, “Imaging in the Physical Sciences”, ~\$300,000 (renewed for a second time, pending final NSF approval).
- K12 Education and Outreach grants totaling ~\$800,000, as PI and Co-I.

DEVELOPMENT ACTIVITIES

Over the past 12 year period I have been very active in Fund Raising. At UM in the past 2 years, 2.6 Million dollars have been raised for the Faculty of Science according to University records, and at RIT, University records showed 9 Million dollars raised for the Carlson Center for Imaging Science over the ten years of my tenure there.

CURRICULUM DEVELOPMENT, EDUCATION, AND PUBLIC OUTREACH

- Lead Teacher and Co-Developer, “Discovery, Creativity and Innovation at the Frontier: A Reading and Discussion Group Across Science and Art”
- Co-Developer, Innovative Freshman Experience, RIT
- Co-Developer and professor, “Frontiers of Science”, two semester general education course with lab, RIT
- Collaborator and professor, Honors Curriculum Creativity and Innovation Program, “Social Networking”, RIT.
- Co-Developer, new PhD Program at RIT, “Astrophysical Science and Technology” (initiated 9/2008), served as co-Director of program until 2009.
- Professor/Mentor, Insight Lab for Science Outreach and Learning Research, RIT, regularly engages 5-15 undergraduates in research each semester.
- Lead, “Reach for the Stars” science program with the Girl Scouts of Western NY
- Collaborator – “Learning Science: Workshops for Families”
- Participant, yearly summer high school intern program sponsored, RIT
- Engaged with North Star Center in STEM Summer Program for prefreshman to improve the retention of underrepresented populations, completed.
- Member, Curriculum Committee, Sustainability Institute, RIT
- Co-Developer, “PhysCalc” - integrated bridge course, to prepare students for the university physics and calculus sequence, RIT.

SELECTED EXTERNAL COMMITTEE AND REVIEW MEMBERSHIPS

- American Institute of Physics Review, Waterloo University, Dept. of Physics and Astronomy and Institute for Quantum Computing, 2016
- Chair-Elect, Chair, Chair-Emeritus, Astronomy Division of the American Association for the Advancement of Science, 2015-2017
- Chair Science Survey Group, National Radio Astronomy Observatory, Jansky Sky Survey Project (VLASS), current
- Member, Science Team, Near Infrared Camera, James Webb Space Telescope
- Past Chair, NASA Chandra Time Allocation Committee, Extragalactic
- Past Member, James Webb Space Telescope Science Advisory Committee
- Past Member, Faculty of Science Review, Dalhousie University
- Past Member, Department of Physics and Astronomy Review, Calgary
- Past Member American Physical Society Climate Study Team, Drexel
- Past Member, United States Astronomy and Astrophysics Advisory Committee,
- Past Chair, Non-Advocate Review Committee for the NASA OpTIIX - Demonstration Mission to the International Space Station
- Past Chair, NASA Keck Time Allocation Committee, Extragalactic
- Past Chair, National Optical Astronomy Time Allocation Committee, Extragalactic
- Past Chair, NASA Keck Time Allocation Committee, Extragalactic
- Past Council of Institutions representative, Universities for Space Research Association
- Past Chair and Member, National Astronomy and Ionospheric Center, Arecibo, Visiting Committee (Completed)
- Past Chair and Member, Associated Universities Incorporated (AUI), National Radio Astronomy Observatory Visiting Committee (Completed)
- Past Member, Arizona State University, School of Earth and Space Exploration Academic Program Review Committee (Completed)
- Past Chair and Member, American Astronomical Society Awards Committee (Completed)
- Past Member, American Astronomical Society Employment Committee,
- Past Chair, Chandra Time Allocation Committee, Extragalactic
- Past Member, National Radio Astronomy Observatory (i) Operations Advisory Committee and (ii) Science Advisory Group, Extended Very Large Array Telescope. Completed
- Past Member, National Research Council of Canada, Peer Review of the Herzberg Institute of Astrophysics. Completed.
- Past Member, Director's Review, Dark Energy Camera and Survey, Fermi National Laboratory, Completed
- Past Member, NASA Senior Review. Completed
- Past Member, Associated Universities Incorporated Operations Advisory Group, Completed.
- Past Severed on multiple peer review committees for US Research Granting Agencies, including NSF (Physics, Astrophysics, Education), NASA, DHS, as well as on international peer research review, including the Austrian Science Fund – ongoing.

SELECTED RECENT INVITED TALKS/PRESENTATIONS

- “Global Women of Light”, 2016 Frontiers in Optics meeting, October 17th 2016, Rochester NY, **Ice Breaker Speaker**
- Arizona State University, Seminar, “**The Long Arc of Science**”, April 20, 2016
- Plenary Speaker, The Canadian Conference for Undergraduate, *Women in Physics*, Dalhousie University Jan. 10th 2016, “**The Accidental Astrophysicist**”

MEETINGS CO-ORGANIZED

- Analysis of Emission Lines, STScI May Symposium 1993
- Women in Astronomy, IAU General Assembly Session 1994
- NGC1068 – Galaxy, Starburst and AGN 1996
- Galaxies at the Highest Resolution, IAU Symposium 1999
- National Academy of Science workshop on Global Challenges and Directions for Agricultural Biotechnology, 2004
- The Extended Very Large Array Vision: Galaxies through Cosmic Time, 2008
- Enhancing the Legacy of the Hubble Space Telescope Spectroscopy, 2012
- The Jansky Very Large Array Sky Surveys, AAS Workshop, 2014

RESEARCH

- Space and ground based studies of Active Galaxies, Galaxy Clusters, & High Redshift Systems.
- Development of astronomical algorithms, instrumentation, and missions.
- Development of algorithm and statistical techniques for the calibration and analysis of fMRI brain imaging data for diagnosis and treatment.
- Over 230 refereed scientific papers and book chapters published.
- Regularly serve as journal article reviewer for numerous refereed journals and grant agencies, within the US and internationally.

PROFESSIONAL SOCIETIES

- Canadian Astronomical Society
- SPIE
- Optical Society of America
- American Association for the Advancement of Science
- Imaging Science and Technology
- American Astronomical Society
- American Institute of Physics
- International Astronomical Union

UNDERGRADUATE RESEARCH STUDENTS SUPERVISED/CO-SUPERVISED

- George Privon, 2004–06, Spitzer Observations of 3CR Radio Galaxies, RIT
- Candida Allen, 2005–06, Design Considerations for a Dedicated Telescope Array to Study Astrophysical Masers, RIT

- Ryan Miller, 2006–07, A Low Frequency Radio Telescope at RIT
- Bryan Rague, 2006–10, Spitzer Observations of Brightest Cluster Galaxies, RIT
- Jacob Kearns, 2006, Optical Spectroscopy of Seyfert Galaxies, RIT
- Shawn Staudaher, 2006-08, Spitzer Observations of 3CR Radio Galaxies, RIT
- Russell Barkley, 2007–08, VLA Observations of Low Luminosity Radio Galaxies, RIT
- Ting Lik, 2007–08, GALEX Ultraviolet Observations of Brightest Cluster Galaxies, RIT
- Melissa Trempanier, 2007–08, Spitzer Observations of Low Luminosity Radio Galaxies, RIT
- Timothy Quinn, 2007-08, A Low Frequency Radio Telescope at RIT
- Gregory Hrinda, 2008, GALEX Observations of 3CR Radio Galaxies, RIT
- Brad Snios, 2008–09, Capstone Project: Ultraviolet Observations of Star Formation in Brightest Cluster Galaxies, RIT
- Karla Hatfield, 2008–09, Spitzer Observations of Radio Galaxies, RIT
- Zachary Lawrence, 2008–09, Radio Observations of Low Luminosity Radio Galaxies, RIT
- Ramakant Sharma, 2008–2010, Radio Observations of Powerful Radio Galaxies, RIT
- Jeffery Smith, 2008–2009, A Search For Double-Double Radio Galaxies, RIT
- Jeffery Smith, 2009–2010, An Algorithm for Finding Features in Spectral Line Data Cubes, RIT
- Megan Dorn, 2009–2010, Spitzer Observations of Radio Galaxies, RIT
- Kevin Christiansen, 2009–2013 X-ray Observations of Radio Galaxies, RIT
- Mark McCoy, 2009–2010, The Spectral Energy Distribution of Radio Galaxies, RIT
- Chris Mularkey, 2009–2010, Radio Observations of Compact Steep Spectrum Radio Galaxies, RIT
- Mike Every, 2010–13, Star Formation in Powerful Radio Galaxies
- Marc Magagnoli, 2011, Infrared Spectral Energy Distributions of Low Luminosity Radio Galaxies, RIT
- Megana Rao, 2011-2012, Compact Steep Spectrum Radio Sources, Harvard/Radcliffe
- Samantha Whitmore, 2011-2012, Star Formation and Activity in Nearby Galaxies, Harvard/Radcliffe
- Rabeea Ahmed, 2011-2012, Ultraviolet observations of nearby Galaxies, Harvard/Radcliffe
- Megan Parsons, 2011-12, The Basis for the Growth in Autism Frequency, Harvard/Radcliffe
- Audrey Zhang, 2011-12, Autism, Autoimmunity, and Changes in Frequency, Harvard/Radcliffe
- Steven Wang, 2011-12, Caffeine Usage in College and its Relation to happiness and productivity, Harvard/Radcliffe
- Alex Jermyn, 2012–14, Infrared Spectral Energy Distributions of Low Luminosity Radio Galaxies, RIT

- Katherine Pierce, 2013, Photometry of Nearby Elliptical Galaxies, RIT
- Brandon Doyle, 2013-2014, Hubble Images of High Redshift Radio Galaxies, RIT
- Hanna Cavanaugh, 2014, HST and Radio Investigations of High Z Galaxies, RIT
- Cameron Lawlor-Forsyth, 2015-2016, Feedback in Galaxies, U. Manitoba
- Robert Gleisinger, 2015-2016, Spitzer Observations of Low Luminosity Radio Galaxies, U. Manitoba
- AJ Gill, 2016, Feedback in Powerful Radio Galaxies, U. Manitoba
- Michael Radica, 2016 (coop student from McMaster), The Feedback Index in Clusters of Galaxies, U. Manitoba

GRADUATE THESES SUPERVISED OR CO-SUPERVISED

- Carlos Stanghellini, “Radio and Optical Imaging of GPS Radio Sources”, University of Bologna, 1992, PhD
- Jack Gallimore – “The Kinematics of the Near Nuclear Gas in Seyfert Galaxies” 1995, U. Maryland, PhD
- Ed Colbert – “Superwinds in Seyfert Galaxies” 1997, U. Maryland, PhD
- Chun Xu – “VLBA and ROSAT Imaging of Nearby Radio Galaxies: Towards Understanding the Nature of Radio Activity”, masters received, PhD on hold, U. Maryland
- Vim de Vries, “Host Galaxies of Powerful Extragalactic Radio Sources, University of Groningen, 1999
- Sigrid de Koff, 2001, Leiden University, did not complete PhD
- Gijs Verdoes-Klein – “Nuclei of Nearby Radio Galaxies: Interplay Between Activity and Galaxy Structure” – 2001, Leiden, PhD
- Jacob Noel-Storr – “Kinematics of the Central Regions of Nearby Radio Galaxies: Constraining the Demographics of Black Holes” – 2004, Columbia Univ, NY, PhD
- David Russell – “Ultraviolet Observations of Radio Jets: Constraints on Jet Physics” – 2004, University of Manchester, PhD
- Avanti Tilak – “Chandra and VLBA Observations of Low Luminosity Radio Galaxies” –Physics, Johns Hopkins University, PhD 2006
- George Privon – “Emission Line Imaging of Powerful Radio Galaxies”, Rochester Institute of Technology, Imaging Science, masters, 2006
- Alvarao Labiano, “Interaction of Compact Radio Sources with their Ambient Medium”, PhD, University of Groningen, 2006
- George Priven, “Spitzer Observations of Cygnus A”, Masters Imaging Science, RIT, 2006
- Andrew Michael – “Classification of Schizophrenia Using fMRI Imaging” - Rochester Institute of Technology, Imaging Science, PhD, 2009
- Linpeng Cheng – “Interpixel Capacitance in IR Arrays for Astronomy - Implications for the James Webb Space Telescope”, Rochester Institute of Technology, Imaging Science, Masters, 2009
- Grant Tremblay – “The Evolution of Powerful Radio Galaxies”, Rochester Institute of Technology, Astrophysical Science and Technology, PhD, 2011

- Siddharth Khullar – “Wavelets Applied to fMRI Data in the Analysis of Schizophrenia”, Imaging Science, PhD, RIT, 2014
- Austin Dehart, 2015, “Xray Observations of CSS Radio Sources”, (moved to Atomic Physics), U. Manitoba
- Shruti Gopal – “New fMRI Brain Imaging Analysis Techniques and their Application to Cognition”, PhD, 2016
- Sravani Vaddi – “A Systematic Study of Nearby Elliptical Galaxies – Understanding Feedback between an Active Nucleus and the Host Galaxy”, PhD, (RIT) 2016
- Kevin Cooke, “Star Formation in Brightest Cluster Galaxies at Intermediate Redshift“, Masters, Astrophysical Sciences, RIT, 2016
- David Saroff - “Searching for Pulsars in M31”, Astrophysical Science and Technology, PhD, current. (RIT), active, 2014-
- Gajendra Katuwal – “Machine Learning Based Autism Detection Using Brain Morphometry”, PhD, current (RIT), 2014-2016
- Chao Zhang, “Gender and Age effects on Brain Resting State Functional Connectivity Derived from Brain Imaging”, PhD, current (RIT), 2015 - active
- Viraj Adduru, “Use of Thick Slice Brain MRI Imaging for Brain Volumetry and Disease Tracking”, PhD, current (RIT), active, 2015-
- Kevin Donlan – “Interpixel Capacitance in Infrared Detectors”, PhD, current, (RIT), active, 2014-
- Robert Gleisenger, “Feedback in Brightest Cluster Galaxies”, masters, University of Manitoba, active, 2016-
- Chetna Dugal, “Jet-Cloud Interaction in AGN, PhD, University of Manitoba active, 2017
- Mainak Singha, “Outflows in Intermediate Luminosity Quasars, PhD, University of Manitoba, active 2017

POSTDOCS SUPERVISED OR CO-SUPERVISED

- Esther Zirbel (STScI), 1993-1995
- Anton Koekemoer (STScI), 1997-1998
- Marek Kukula, (STScI), 1997-1999
- Andre Martel (STScI), 1999-2001
- Catherine Buchanan (RIT), 2004-2006
- Preeti Kharb (RIT), 2005-2007
- Jake Noel-Storr (RIT), 2006-2008
- Rupal Mittal (RIT), 2009-2014
- Sarka Wykes (University of Manitoba), 2015-

BIBLIOGRAPHY, STEFI ALISON BAUM

Articles in Refereed Journals

Note: In the past years since joining academia, I have published many referred journal articles with undergraduate coauthors, as well as graduate and postdoctoral coauthors. The undergraduate authors are indicated with a *. In addition, I have published many papers with PhD students throughout my career – those papers are marked with a ** and papers with postdocs are marked with ***.

1. **S.A. Baum** and S. Hoban, “A Search for the Millimeter Wave Transitions of CO⁺ in Comet P/Halley,” *Icarus*, 67, 515 (1986).
2. T.M. Heckman, E.P. Smith, **S.A. Baum**, W.J.M. van Breugel, G.K. Miley, G.D. Illingworth, G.D. Bothun, and B. Balick, “Galaxy Collisions and Mergers: The Genesis of Very Powerful Radio Sources,” *Astrophysical Journal*, 311, 526 (1986).
3. S. Hoban and **S.A. Baum**, “A VLA Search For 2 cm Continuum Emission From Comet P/Halley,” *Icarus*, 70, 264 (1987).
4. R. Elston and **S.A. Baum**, “VLA Observations of W50: A Study of the Interaction of SS433 with its Environment,” *Astronomical Journal*, 94, 1633 (1987).
5. C.P. O’Dea and **S.A. Baum**, “A Search for OH Absorption in NGC 1275,” *Astronomical Journal*, 94, 1476 (1987).
6. **S.A. Baum**, T. Heckman, A.H. Bridle, W. van Breugel, and G.K. Miley, “Extended Emission Line Gas in Radio Sources: Broad Band Optical Imaging, Narrow Band Optical Imaging, and Radio Imaging of a Representative Sample,” *Astrophysical Journal Supplements*, 68, 643 (1988).
7. **S.A. Baum** and T. Heckman, “Extended Optical Line Emitting Gas in Powerful Radio Galaxies: Statistical Properties and Physical Conditions,” *Astrophysical Journal*, 336, 681 (1989).
8. **S.A. Baum** and T. Heckman, “Extended Optical Line Emitting Gas in Powerful Radio Galaxies: What is the Radio Emission-Line Connection?” *Astrophysical Journal*, 336, 702 (1989).
9. T.M. Heckman, **S.A. Baum**, W.J.M. van Breugel, and P. McCarthy, “Dynamical, Physical, and Chemical Properties of Emission-Line Nebulae in Cooling Flows,” *Astrophysical Journal*, 338, 48 (1989).
10. C.P. O’Dea, **S.A. Baum**, and G.B. Morris, “CCD Observations of GigaHerz-Peaked-Spectrum Radio Sources,” *Astronomy and Astrophysics Supplements*, 82, 261 (1990).
11. **S.A. Baum**, C.P. O’Dea, D.W. Murphy, and A.G. de Bruyn, “01801+388: A Compact Double Source with Surprising Properties,” *Astronomy and Astrophysics*, 232, 19 (1990).
12. M.V. Penston *et al.*, “The Extended Narrow Line Region of NGC4151 I.-Emission Line Ratios and Their Implications,” *Astronomy and Astrophysics*, 236, 53 (1990).
13. C. Stanghellini**, **S.A. Baum**, C.P. O’Dea, G.B. Morris, “Extended Radio Emission Associated with GigaHerz-Peaked-Spectrum Radio Sources,” *Astronomy and Astrophysics*, 233, 379 (1990).

14. **S.A. Baum**, T.M. Heckman, W. van Breugel, "Long Slit Optical Spectroscopy of Emission Line Nebulae in Radio Galaxies: The Data," *Astrophysics Journal Supplements*, 74, 389 (1990).
15. C.P. O'Dea, **S.A. Baum**, C. Stanghellini**, G.B. Morris, A.R. Patnaik, Gopal-Krishna, "Multifrequency VLA Observations of GHz-Peaked-Spectrum Radio Cores," *Astronomy and Astrophysics Supplements*, 84, 549 (1990).
16. A.H. Bridle, **S.A. Baum**, R. Fanti, P. Parma, E.B. Fomalont and R.D. Ekers, "WSRT and VLA Observations of the Radio Galaxy B2 0326+39 at 0.6, 1.5 and 5 GHz," *Astronomy and Astrophysics*, 245, 371 (1991).
17. N.E. Kassim, **S.A. Baum**, K.W. Weiler, "A New Look at the 'Jet' in the CTB37A/B SNR Complex," *Astrophysical Journal*, 374, 212 (1991).
18. **S.A. Baum** and C.P. O'Dea, "Multifrequency VLA Observations of PKS 0745-191: the Archetypal 'Cooling Flow' Radio Source?" *Monthly Notices of the Royal Astronomical Society*, 250, 737 (1991).
19. C.P. O'Dea, **S.A. Baum**, and C. Stanghellini**, "What are the GHz-Peaked-Spectrum Radio Sources?" *Astrophysical Journal*, 380, 66 (1991).
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