

Resume – Dr. Stefi Baum, 8/20/10

Dr. Stefi Alison Baum
Director, Department Chair, and Professor, Xerox Chair
Chester F. Carlson Center for Imaging Science
54 Lomb Memorial Drive
Rochester Institute of Technology
Rochester, NY 14623-5604

Place of Birth		Chicago Illinois
High School	June 1976	Princeton Public High School, Princeton, NJ
College	June 1980	Harvard University, Cambridge, MA B. A. Physics, cum laude
Graduate School	Dec 1987	University of Maryland, College Park, MD Ph.D. Astronomy

Post-Degree Education

American Council on Education:

- Chairing the Academic Department

MIT-Sloan Executive Series:

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

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

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

United States Foreign Service Institute:

- Global Issues

Pardee RAND Graduate School:

- New Security Challenges: Policy Issues and Analytic Approaches

Expertise

Extensive leadership experience in a range of environments including government, national centers, academia and in highly interdisciplinary environments. Expertise working at the interface of engineering and science, and at the interface of engineering, science and public policy. Experience with university pedagogy in science, engineering and innovation, K-12 STEM (Science Technology Engineering and Math) education and public outreach, and programs to recruit and retain women and minorities in STEM careers. Well versed in a range of scientific and engineering issues and disciplines, the application of scientific, statistical, and engineering methodology, and management of large programs.

Research expertise in imaging science and astrophysics, specializing in understanding the origin and nature of active galaxies and clusters of galaxies, the development and deployment of astronomical instrumentation and missions, and the development of algorithms for fMRI brain imaging. Over 175 refereed journal articles published and 10 PhD students mentored.

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

Languages: English – proficient (native language), Dutch – moderate proficiency,
French – some proficiency

Security Clearance Top Secret (currently inactive)

Direct Leadership and Management Experience

- Director and Department Head, Chester F. Carlson Center for Imaging Science (CIS), Rochester Institute of Technology. CIS is a highly interdisciplinary academic education and research center, providing undergraduate education, post graduate PhD and masters programs and extensive research activities in a range of imaging related fields including remote sensing, detector development, biomedical imaging, color science, visual perception, astronomy, printing, and document reconstruction. CIS has ~50 faculty (half are full time faculty in the Department and half are faculty drawn from six colleges of the University with joint appointments in CIS), and over 40 research and administrative staff.
- Division Head, Engineering Software and Services Division, Space Telescope Science Institute. Responsible for the leadership and management of 140 software developers, testers, systems engineers, scientists and hardware engineers supporting the Hubble Space Telescope and the James Webb Space Telescope.
- Branch Chief/Team Lead. Management and Leadership responsibility for 25 PhD astronomers and technical staff supporting the development and operation of an advanced scientific instrument for the Hubble Space Telescope, the Space Telescope Imaging Spectrograph.
- Lead Archive Scientist – Provided scientific oversight of the HST archive development and deployment.

Direct Government Experience

- Diplomacy Science Policy Fellow, United States Dept. of State, Economics Bureau, Office of Agriculture, Biotechnology, and Textiles, sponsored by the American Institute of Physics through the American Association for the Advancement of Science.

Board Experience

- Trustee, Universities Space Research Association (USRA) (active), past member of the USRA Board Compensation and Strategic Planning Committees, current member of USRA Homeland and National Security Committee.
- Board of Governors, Great Lakes Research Consortium (active).
- VP, Board of Directors, Society for Imaging Science and Technology (term completed)

External Grant Support (complete list provided at end of resume)

- Grants totaling just under 5 Million won during past six years, ~40% as Principal Investigator. Currently just over 3 Million dollars of additional grants have been submitted and are pending review.
 - NYSTAR Faculty Development Grant, PI - \$729,000, Sensor Development
 - Scientific Research Grants, totaling over 3.3 Million
 - NSF Professional Masters Grant, "Science Master's Program: Decision Support Technologies for Environmental Forecasting and Disaster Response", ~\$660,000
 - An NSF Advance PAID Grant, "Establishing the Foundation for Future Organizational Reform and Transformation", ~\$200,000
 - K12 Education and Outreach grants totaling ~\$800,000

External Gift Support

Over the past 6 year period, the Chester F. Carlson Center for Imaging Science has received 9 Million dollars of donations in support of our programs, students, and research, as recorded by the RIT Development Office.

PROFESSIONAL TIMELINE

Timeline	Professional Career	Academic Career
7/04 - present	Director, Center for Imaging Science, Rochester Institute of Technology	Full Professor, RIT, Endowed Xerox Chair since 2007.
11/02-6/04	Senior Science/Diplomacy Fellow, <i>US Dept. of State</i> & American Institute of Physics Diplomacy Fellow Program	leave of absence from <i>STScI</i>
9/02 - ongoing		Co-I & Lead Operations Scientist, NIRCAM on JWST
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		Hubble Fellow, <i>Johns Hopkins University</i>
9/87-9/90		Postdoctoral Research Fellow, <i>Netherlands Foundation for Research in Astronomy</i>

Addresses for Employment History

- 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

Fellowships and Awards

- RIT Million Dollar Club-- for securing more than 1 Million dollars in external grants and contracts (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 Group Achievement Award, Space Telescope Imaging Spectrograph Team, (1996)
- STScI Individual Achievement Award, Space Telescope Imaging Spectrograph (1996)
- STScI Group Achievement Award, Data Quality Project (1996)
- STScI Individual Achievement Award, Archive Development/Deployment (1993)
- STScI Group Achievement Award, Archive Development/Deployment (1993)
- Annie Jump Cannon Award, awarded annually to a young female astronomer for Scientific Excellence and Promise (1993)
- Junior Research Fellowship, National Radio Astronomy Observatory (1985)

Major Committee Memberships (over past 4 years)

- Chair, American Astronomical Society Awards Committee (active)
- Member, James Webb Space Telescope Science Advisory Committee (active)
- Member, Science Team, Near Infrared Camera, James Webb Space Telescope (active)
- Chair, National Optical Astronomy Extragalactic Time Allocation Committee (active)
- Member and Chair, National Astronomy and Ionospheric Center Arecibo Visiting Committee (term completed)
- Member and Chair, Associated Universities Incorporated (AUI), National Radio Astronomy Observatory Visiting Committee (term completed)
- Member, (i) Operations Advisory Committee and (ii) Science Advisory Group, Extended Very Large Array Telescope, National Radio Astronomy Observatory (term completed)