Biography of Angela Janette Mason

Ms. Angela J. Mason started her career as an Engineer at the National Aeronautics and Space Administration (NASA) in 1988. Performing as a multidisciplinary researcher, spacecraft manager, project leader, project manager, systems engineer, loaned executive, chairperson, director, community leader, and team member, Ms. Mason became a NASA leader and a positive role model. Her diverse professional background has afforded her the opportunity to acquire skills in analysis, experimental research, and development, as well as to hone her leadership, organizational, interpersonal and communications skills. Her goal is to enhance and utilize the breadth of skills she has obtained through her many leadership roles.

She began her NASA career at the NASA Langley Research Center (LaRC) and has made numerous contributions over the years, including significant improvements to various systems in the High-Reynolds-Number Aerodynamics Branch (HRNAB); the implementation of a new data analysis and plotting system, which received very favorable reviews from industry users; and the development of an Employee Mobility and Training Program within the Aerodynamics Division. In 1994, Ms. Mason began performing research in the Structural Dynamics Branch. Some of her accomplishments have involved experimental investigations on aircraft tires and landing gear systems. Using high-quality test data, she validated theoretical predictions of the viscous behavior for a Space Shuttle Orbiter Nose-Gear Tire. These results are highly valued in the tire analysis and landing gear community and have been documented in several valuable publications. Ms. Mason also initiated and took the lead in the implementation of the new state-of-the-art Aircraft Landing Dynamics Facility data acquisition system. She received a NASA Superior Accomplishment Award for this effort.

After earning her Master's Degree, Ms. Mason accepted an assignment with the Space Launch Initiative's (SLI) Next Generation Launch Technology (NGLT) Program Office. From 2003-2004 she held the position of Deputy Manager for Systems Engineering & Integration in the NGLT/Vehicle Systems Research & Technology (VSR&T) Project Office (formally SLI, 2nd Generation Reusable Launch Vehicle). The NGLT/VSR&T Project Team consisted of Project Leads and Task Leads from nine NASA Centers, Department of Defense, Industry, and Academia. In 2002 and 2004 Ms. Mason was presented with NASA's Superior Accomplishment Award and in 2003, she received a Performance Award for exceptional performance in NASA LaRC's activities in the SLI Program.

Currently Ms. Mason is the Decadal Survey Tier II Mission Manager for the Earth Science Projects Division/Earth Systematic Missions Organization, NASA Goddard Space Flight Center (GSFC). From November 2006-April 2010, she was the Spacecraft Integration & Test Manager in the Spacecraft Division for the National Polar-orbiting Operational Environmental Satellite System (NPOESS) in the Integrated Program Office (IPO), GSFC. She was responsible for directing and managing technical and programmatic tasks and responsibilities for the Electrical Engineering Model Testbed; Spacecraft Integration and Test; Sensor Payload Accommodations; Mechanical and Electrical Ground System Equipment; and Ground Software. As of October 2008, she also was assigned the IPO Program Manager for two GFE Sensors: CERES and TSIS Instruments. Previously Ms. Mason was the Spacecraft Avionics Lead for the Spacecraft Division which included Control & Data Handling, Attitude Control, Flight Vehicle Simulator, Fault Tolerance1394 and the Flight Software Subsystems.

Prior to her role on the NPOESS Project, Ms. Mason joined the Environmental Test Engineering and Integration Branch at the NASA GSFC. Ms. Mason was the Lead Environmental Project Engineer (EPE) for the Solar Dynamics Observatory (SDO) Project from 2005-November 2006. She was responsible for leading the SDO Project's environmental tests and integration efforts, and had also provided EPE expertise to other projects such as the John Hopkins Applied Physics

Laboratory's New Horizons and STEREO Spacecrafts. She received a Performance Award for exceptional service in the performance of her duties.

Ms. was born in Wilmington, Delaware and graduated from the Howard Career Center High School in 1981 with academic emphasis on data processing. In 1985 she received her BA in Mathematics from Hampton University. She later went on to attain a MS in Engineering Management from The George Washington University in 2000. She is also very involved in community service. She has served on numerous education committees, and has initiated and judged academic contests. Her activities at church have included Founder and Director for the Book Store, Leadership Instructor, Hostess Director, Director of the Single Adult Fellowship and Evangelism Committee, Editor-in-Chief for the newsletter and choir member. She is also a member of the National Technical Association.

A synopsis of her professional experience is given below:

National Aeronautics and Space Administration (NASA)

AST, Flight Systems Test, General Engineer 2010 - present**: Mission Manager, Decadal Survey Tier II.** NASA GSFC, Earth Science Projects Division/Earth Systematic Missions Organization, Code 420.0. Tier II Missions include Surface Water Ocean Topography (SWOT), Active Sensing of CO2 Emissions over Nights, Days, and Seasons (ASCENDS), Aerosol - Cloud – Ecosystems (ACE), Hyperspectral Infrared Imager (HyspIRI), and Geostationary Coastal and Air Pollution Events (Geo-CAPE).

AST, Flight Systems Test, Aerospace Engineer 2006-2010: **Spacecraft Integration & Test Manager; and Program Manager for two GFE Payload Sensors:** Total and Spectral Solar Irradiant System (TSIS)and Clouds & Earth Radiant Energy Budget (CERES) Instruments. NASA GSFC, Flight Projects Directorate, National Polar-Orbiting Operational Environmental Satellite System (NPOESS), Integrated Program Office, Code 420.1.

AST, Flight Systems Test, Aerospace Engineer 2005–2006: **Environmental Project Engineer**. NASA GSFC, Applied Engineering and Technology Directorate, Environmental Test Engineering & Integration Branch, Code 549.

AST, Structural Mechanics, Aerospace Engineer 1994–2005. NASA LaRC, Structures and Materials, Structural Dynamics Branch, Aircraft Landing Dynamics Facility.

Deputy Manager, Systems Engineering & Integration 2003–2004. **Integration Manager** 2001–2003. NASA LaRC Space Launch Initiative (SLI), Next Generation Launch Technology Program, Vehicle Systems Research and Technology Project Office (formally SLI, 2nd Generation Reusable Launch Vehicle).

AST, Data Systems, Computer Engineer 1993–1994. NASA LaRC, Structures Division, Aeroelastic Analysis and Optimization Branch.

AST, Data Systems, Computer Engineer 1988–1993. NASA LaRC, Applied Aerodynamics Division, High-Reynolds-Number Aerodynamics Branch.

Bibliography:

Mason, Angela J.: An Experimental Investigation of Damaged Arresting Gear Tapes for the Langley Aircraft Landing Dynamics Facility. NASA Technical Memorandum Publication 209839, December 1999.

Mason, Angela J.; Tanner, John A.; Johnson, Arthur R.: Quasi-Static Viscoelastic Loading Measurements Of An Aircraft Tire. NASA Technical Memorandum Publication 4779, September 1997.

Johnson, Arthur R.; Tanner, John A.; and Mason, Angela J.: Quasi-Static Viscoelastic Finite Element Model of an Aircraft Tire. NASA Technical Memorandum Publication 209141 ARL-TR-2000, April 1999.

Johnson, Arthur R.; Tanner, John A.; and Mason, Angela J.: A Kinematically Driven Anisotropic Viscoelastic Constitutive Model Applied To Tires. Presented at Computational Modeling of Tires Workshop, Hampton, VA, October 26-27, 1994. NASA Conference Publication 3306, August 1995.

Johnson, Arthur R.; Tanner, John A.; and Mason, Angela J.: A Viscoelastic Model for Tires Analyzed with Nonlinear Shell Elements. The Tire Society Fourteenth Annual Meeting and Conference On Tire Science and Technology, Akron, Ohio, March 21-22, 1995.

Mason, Angela J.: Enhancing Your Organization by Utilizing Cooperative Development Programs. Thesis, The George Washington University, 2000.

Awards:

Outstanding Team Work of the Quarter Award for numerous accomplishments for the Total Solar Irradiance Sensor (TSIS) effort, NPOESS, IPO, 2010. NASA GSFC Accomplished Award, 2009; and Performance Awards, 2006, 2007 and 2008. Excellence in Outreach Award, NASA GSFC 2006. Time-Off Awards, NASA GSFC 2006, 2007 and 2009. Superior Accomplishment Awards, NASA LaRC 1999, 2002 and 2004. Performance Award NASA LaRC 2003. Inspiring Young Minds Award for being the Founder of the Annual National Technical Association (NTA) Math Contest, Hampton Roads Chapter, 2005. Outstanding Work and Commitment to the Combined Federal Campaign, Loaned Executive, 2000-2001. Professional Woman of the Year, Commonwealth College, 1996; NASA LaRC Special Achievement Award for Group Accomplishments 1990; Letter of Recognition for Excellent Support for the NASP Test NTF046, Propulsion Aerodynamics Branch, AAD, 1991; Certificate of Appreciation - Atlantic Intelligence Command, Department of Defense, Lecturer for Women's Observance Month, 1995; Science Conference Presenter, Hampton on Youth, 1990; Menchville High School, Presenter for Career Day, 1996; Academic Achievement, Active Participation and voted Most Dedicated, Student Special Services, Hampton University, 1981-1985; Outstanding Young Women of America 1986; Most Dedicated Member of National Technical Association 1987, NTA: Outstanding Member 1989, Outstanding Project 1988, 1989, Outstanding Committee 1989, 1990, 1993.

Professional Organizations:

National Technical Association: NTA Hampton Roads Chapter, President 1991-93, Mathematics Contest Originator and Chairperson 1988-91, Mathematics Contest Committee, Student Symposium Committee, SAT Tutorial Committee.

Other NASA Programs and Community Service:

NASA: Project Management Challenge, Session Coordinator, 2008, 2010. Hiring Manager and Recruiter for the NASA Agency-wide Corporate Recruitment Strategy, 2003. Loaned Executive, Combined Federal Campaign, 2000-2001; Multicultural Leadership Team, Chair 1998-1999, Education Committee 1997; Peninsula United Way, Day of Caring, 1997, 1998; Combined Federal Campaign, Key Person 1997; Technology Opportunities Showcase Education Committee, Chairperson 1995; Middle School Aerospace Careers Program; National Engineer's Week Lecturer; Career Day Representative. **COMMUNITY**: Elizabeth City State University, Lecturer 2001. Norfolk State University Annual Mathematics and Computer Science Symposium Judge since 1999. Newport News Science Fair Judge since 1988. Capital Community Church since 2005: New Members 401 Class Instructor and Information Desk Ministry Director. The Messiah Center Church 1983-2005: Book Store Founder and Director 2002-2005; Leadership Instructor; Single Adult Fellowship and Evangelism Director 1995-2002; Newsletter, Editor-in-Chief 2000–2001; Choir member; Hostess Ministry Director 1989-1994; and Promotions Director 1984-1985. Perform presentations in colleges, military, conferences, churches, and in elementary, middle and high schools.