

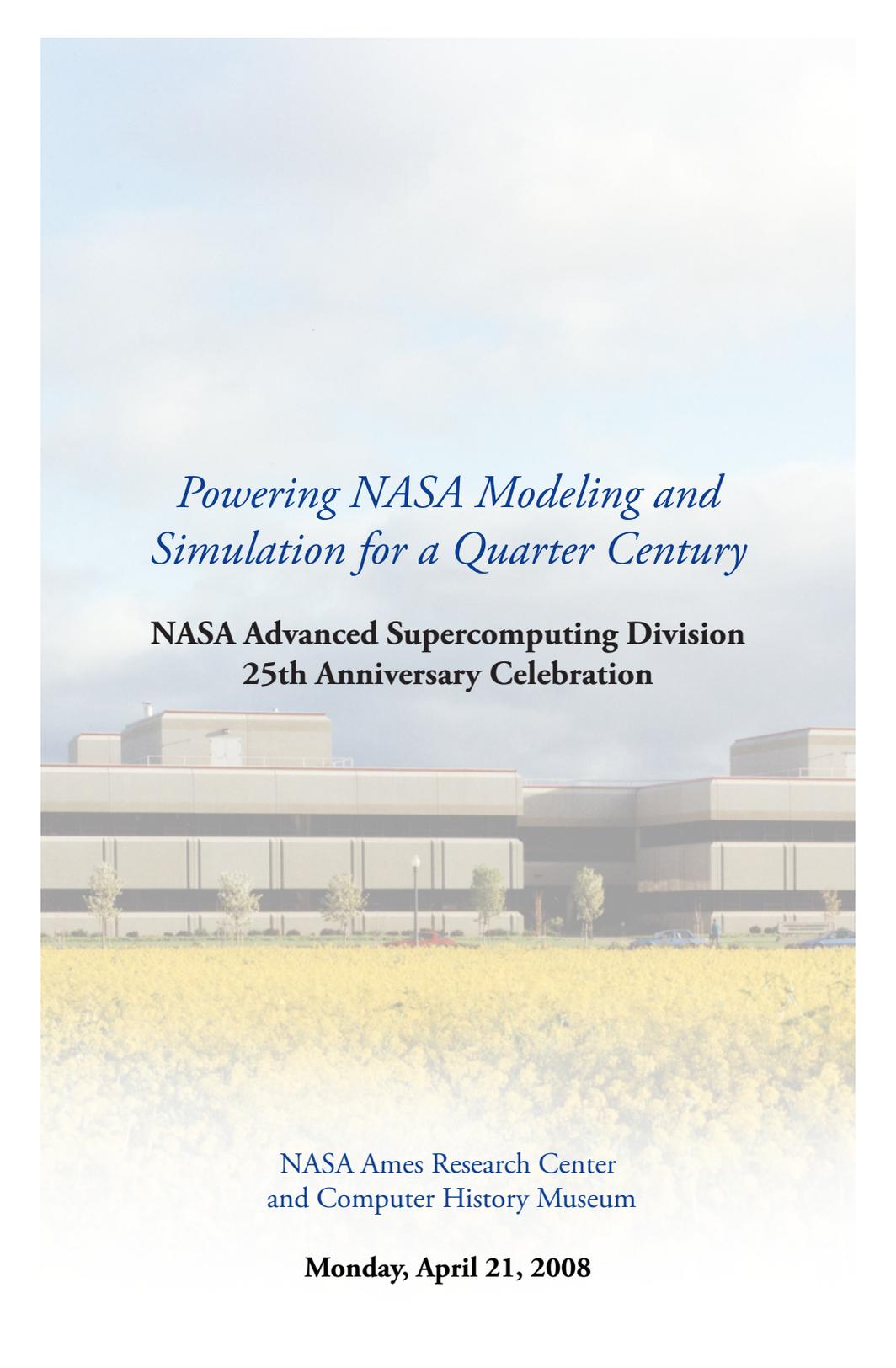
National Aeronautics and Space Administration



*Welcome to the*  
NASA Advanced Supercomputing (NAS) Division's



*25<sup>th</sup>*  
*Anniversary*



*Powering NASA Modeling and  
Simulation for a Quarter Century*

**NASA Advanced Supercomputing Division  
25th Anniversary Celebration**

NASA Ames Research Center  
and Computer History Museum

**Monday, April 21, 2008**

# AMES RESEARCH CENTER



8:00 A.M. . . . . **Seating Begins**

8:40 A.M. . . . . **Welcome**

S. Pete Worden  
– *Director, Ames Research Center*

Marvin “Chris” Christensen  
– *Deputy Director, Ames Research Center*

9:00 A.M. . . . . **Remarks**

**Agency Historical View**

Hans M. Mark  
– *Former Ames Center Director*

**Supporting NASA’s HEC Needs**

Tsengdar J. Lee  
– *Scientific Computing Portfolio Manager,  
Science Mission Directorate*

**Role of HEC in Supporting  
Aeronautics Research Mission**

Juan J. Alonso  
– *Fundamental Aeronautics Program Director*

10:20 A.M. . . . . **Break** (20 minutes)

10:40 A.M. . . . . **Remarks**

**Role of HEC in Supporting  
Exploration Systems Mission**

William H. Arceneaux  
– *Test and Evaluation Director, Constellation Program*

**Role of HEC in Supporting  
Exploration Systems Mission**

James L. Reuter  
– *Vehicle Integration Manager*

**Role of HEC in Supporting Science Mission**

Randall Friedl  
– *Earth Science, Chief Scientist*

**Role of HEC in Supporting Science Mission**

Joseph H. Bredekamp  
– *Science Chief Information Officer*

**Role of HEC in Supporting  
Space Operations Mission**

Reynaldo J. Gomez  
– *Technical Panel Chairman, Shuttle Ascent Aerosciences*

12:20–1:30 P.M. . . . . **Lunch Break**

1:30–3:30 P.M. . . . . **Tours** (Building 258)

– *NAS Computer Room*  
– *Hyperwall Visualization Laboratory*

# COMPUTER HISTORY MUSEUM



## 4:00 P.M. . . . . Welcome and Speaker Introductions

John W. “Jack” Boyd  
– *Historian, Ames Research Center*

## 4:15 P.M. . . . . Remarks

### Historical View from Division Perspective

Frank “Ron” Bailey  
– *Founding NAS Division Chief*

### Historical View from Headquarters Perspective

Randolph A. Graves, Jr.  
– *First NAS Program Manager at NASA Headquarters*

### Historical View from Center Perspective

William F. Ballhaus, Jr.  
– *Former Ames Research Center Director*

### Historical View from User Perspective

Paul E. Rubbert  
– *Former NAS User*

### NAS Columbia Supercomputer in 120 Days

Walter F. Brooks  
– *Former NAS Division Chief*

### Current View from User Perspective

Charlie J. Nietubicz  
– *Army Research Laboratory*

### NAS Today and Tomorrow

Rupak Biswas  
– *NAS Division Chief,*  
*High End Computing Capabilities Project Manager*

## 6:00–8:30 P.M. . . . . Reception

# SPEAKER BIOS (in order of appearance)



### Pete Worden

Pete Worden (Brig. Gen., USAF, ret.) is the NASA Ames Research Center Director. Prior to becoming Director, Worden was a Research Professor of Astronomy, Optical Sciences, and Planetary Sciences at the University of Arizona, where his primary research direction was the development of large space optics for national security and scientific purposes and near-Earth asteroids. He is a recognized expert on space issues.



### Chris Christensen

Chris Christensen is the Ames Research Center Deputy Director. He previously served as Special Assistant to the Center Director. His 40 years in the aerospace industry includes Western Program Office Site Manager for Lockheed Martin, where he was responsible for consolidated programs at Ames and Dryden Flight Research Center, including Space Shuttle programs, Space Station, SOFIA, and Kepler.



### Hans Mark

Hans Mark is a Professor of Aerospace Engineering and Engineering Mechanics at the University of Texas at Austin, a post he has held since 1988. Mark served as Ames Center Director from 1969 to 1977, and as NASA Deputy Administrator from 1981 to 1984. He managed Ames research and applications efforts in aeronautics, space science, life science, and technology. He has also served as Undersecretary and Secretary of the Air Force.



### Tsengdar Lee

Tsengdar Lee is the Scientific Computing Portfolio Manager at NASA Headquarters. He is responsible for maintaining the high-end computing capability to support the Agency’s aeronautics research, human exploration, scientific discovery, and space operations missions. Lee also manages the weather research and data analysis portfolio in NASA’s Science Mission Directorate.



### Juan Alonso

Juan Alonso is the Director of the Fundamental Aeronautics Program in NASA’s Aeronautics Research Mission Directorate. Prior to joining NASA, Alonso was a professor of Aeronautics and Astronautics at Stanford University. He founded and directed the Aerospace Design Laboratory, specializing in high-fidelity computational design methodologies for realizable and efficient aerospace systems.



**Bill Arceneaux**

Bill Arceneaux is the Test and Evaluation Director for NASA's Constellation Program, part of the Agency's Exploration Systems Mission Directorate charged with developing human spaceflight systems needed for space exploration. Previous assignments include the Orbital Space Plane, International Space Station, and Space Shuttle programs, as well as lead engineering liaison to the Columbia Accident Investigation Board.



**Jim Reuter**

Jim Reuter is the Vehicle Integration Manager for the Ares Projects Office in the Constellation Program at Marshall Space Flight Center. He is responsible for overseeing the integrated design and performance of the Ares launch vehicles. Previous roles include Space Shuttle Propulsion Deputy Manager, Space Shuttle External Tank Deputy Project Manager, and acting Associate Director for the Space Transportation Technology Division at NASA Headquarters.



**Randy Friedl**

Randy Friedl is currently serving as the Deputy Chief Scientist for Earth Science within the Science Mission Directorate at NASA Headquarters. Prior to that, Friedl was the Chief Scientist for the Jet Propulsion Laboratory (JPL) Earth Science and Technology Directorate, serving as JPL's primary science contact to NASA's Earth Science Division.



**Joe Bredekamp**

Joe Bredekamp is the Senior Science Program Executive for Information Systems in the Science Mission Directorate at NASA Headquarters. He is responsible for providing support to the NASA science research community in the areas of high-performance computing, networking, and data management and archiving. Among other positions served in 40 years at NASA, he was Associate Chief of the Space Data and Computing Division at Goddard Space Flight Center.



**Ray Gomez**

Ray Gomez serves as the Technical Panel Chairman for Shuttle Ascent Aerosciences in the Engineering Directorate at NASA Johnson Space Center. In addition to reviewing all integrated aerodynamics products for the Space Shuttle Program, he leads development of wind tunnel tests, CFD simulations, and in-flight Shuttle debris transport assessments.



**Jack Boyd**

Jack Boyd joined Ames in 1947 as an aerodynamicist, then rose through the ranks of Ames research management. In the early 1980s, as NAS was coming to fruition, he served as Acting Deputy Director and Associate Director, responsible for all research staff and facilities at Ames. He currently serves as Senior Advisor to the Center Director, Omsbud, and Senior Advisor for History at Ames.



**Ron Bailey**

Ron Bailey is a Senior Consultant for Computer Sciences Corporation in the NAS Division. A computational fluid dynamics (CFD) pioneer, he led development of the NAS Program, and was the founding Manager and Division Chief of NAS. Bailey has 40 years of research and management experience in high-performance computing applications and systems.



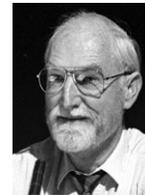
**Randy Graves**

Randy Graves is Chairman of the Board for DayStar Technologies, Inc. In the 1980s, he was the first NAS Program Manager at Headquarters, where he promoted NAS' importance to the U.S. supercomputing effort. Graves also helped shape national high-performance computing policies and was influential in starting the HPCC Program of the 1990s.



**Bill Ballhaus**

Bill Ballhaus is recently retired from his position as President and CEO of The Aerospace Corporation, a nonprofit organization dedicated to solving critical issues in the nation's space program through science and technology. Prior to this, Ballhaus was Director of Astronautics and Ames Center Director during the early years of NAS.



**Paul Rubbert**

Paul Rubbert is retired from the Boeing Company, where he served as Chief of Boeing's Aerodynamics Research Unit. In that capacity, he led both the development of Boeing's CFD and real-world pioneering application to airplane design. Rubbert's insight and vision enabled him to help guide the evolution of CFD, supercomputing, and NAS.

**Walt Brooks**

Walt Brooks is currently a consultant to the Exploration Technology Directorate at Ames Research Center. He was chief of the NAS Division from 2003–2005, during which time he led NASA's participation in the interagency High-End Computing Revitalization Task Force, spear-headed approval of the Columbia supercomputer purchase, and restored NAS as the Agency's lead supercomputing center.

**Charlie Nietubicz**

Charlie Nietubicz is the Director of the DoD's Army Research Lab (ARL) Major Shared Resource Center and Chief of the Advanced Computing and Computational Sciences Division. He is responsible for management and oversight of Advanced Computing for the ARL facility and the Army High Performance Computing Research Center (AHPCRC), now located at NAS.

**Rupak Biswas**

Rupak Biswas is Chief of the NAS Division and Project Manager for the High-End Computing and Capabilities project. He oversees the full range of high-performance computing operations and services for NASA's premiere supercomputing center. He has guided the Division through several major transformations to ensure the organization has strong Agency-level support and broad mission impact.

