INDEX

Abdol-Hamid, Khaled S., 42
Aftosmis, Michael J., 98
Ahmad, Jasim, 22

Bacmeister, Julio, 72
Baker, John, 92
Bakhle, Milind, 24
Balaji, Venkatramani, 68
Balakumar, Ponnampalam, 28
Barnhardt, Mike, 50
Bartels, Robert, 48
Bauer, Steven, 44
Benson, David, 94
Berger, Marsha J., 98
Bian, Huisheng, 76
Biedron, Robert, 48
Bosilovich, Michael, 72
Brown, James, 60
Buning, Pieter, 62

Campbell, Charles, 102
Carbon, Duane, 30
Cen, Renyue, 70
Centrella, Joan, 92
Chaban, Galina, 30
Chaderjian, Neal M., 22
Chan, William, 54, 108
Chang, I-Chung, 22
Chen, Junye, 72
Chin, Mian, 76, 78
Chwalowski, Pawel, 48, 62
Colarco, Peter, 74
Compton, William, 44

da Silva, Arlindo, 74

Dalton, Jeff, 24
Davis, Philip, 56
Deere, Karen, 42, 44
Diehl, Thomas, 76
Dorney, Daniel, 40, 52, 100, 106
Dyakonov, Artem, 60

Edquist, Karl, 60
Envia, Edmane, 32

Fok, Mei-Ching H., 90

Garboczi, Edward J., 112
Gelaro, Ron, 72
George, William, 112
Georgobiani, Dali, 94
Gökçen, Tahir, 50
Gomez, Reynaldo J., 104
Gross, Richard, 84
Guruswamy, Guru, 22
Gusman, Marshall, 108

Hagedorn, John G., 112
Hah, Chunill, 26
Haidvogel, Dale, 84
Hathaway, Michael, 24
Hawke-Wong, Veronica, 54
Hirsch, Adam I., 82
Holst, Terry, 22
Housman, Jeffrey, 108
Hui-Chun Liu, Emily, 72
Hunter, Craig, 44
Huo, Winifred, 30
Husmeier, Frank, 114

Jaffe, Richard, 30
Jiang, Weiyuan, 86
Jin, Haoqiang H., 26

Kandil, Osama A., 28
Kao, David, 22
Kara, Kursat, 28
Kim, Gi-Kong, 72, 74
Kim, Kyu-Myong, 78
Kiris, Cetin, 108
Kirk, Benjamin, 46
Klopfer, Goetz H., 54
Klypin, Anatoly, 66
Krist, Steven, 44
Kuang, Weijia, 86
Kucsera, Tom, 76
Kwak, Dochan, 108

Laible, Andreas, 114
Lau, William K., 78, 88

Lessard, Victor, 102
Lin, John C., 82
Linker, Jon A., 80
Lionello, Roberto, 80
Liu, Yen, 30
Lytle, John, 24

McDougal, Kris, 100

Magee, Todd, 36
Magin, Thierry, 30
Martys, Nicos S., 112
Massey, Steve, 48
Matsui, Toshihisa, 78
Mayer, Christian, 114
Michalak, Anna M., 82
Mikic, Zoran, 80
Mineck, Ray, 48
Mizuno, Yosuke, 64
Mok, Yung, 80
Moore, Thomas E., 90
Murman, Scott, 104

Nehrkorn, Thomas, 82
Nemec, Marian, 98
Nielsen, Eric, 74
Niemiec, Jacek, 64
Nishikawa, Ken-ichi, 64
Nordlund, Åke, 94

Olejniczak, Joseph, 46
Onufer, Jeffrey, 54

Pandya, Shishir, 54
Pao, Jenn Louh, 34
Pao, S. Paul, 42
Prabhu, Dinesh, 30, 50, 60
Primack, Joel, 66
Pulliam, Thomas, 22

Reale, Oreste, 88
Reddy, T. S., 24
Rienecker, Michelle, 72, 74
Riley, Pete, 80
Rogers, Stuart, 46, 104

Romander, Ethan, 22
Rosati, Anthony, 68

Schaffenberger, Werner, 94
Schauerhamer, Daniel Guy, 108
Schmauch, Preston, 40, 52, 106
Schubert, Siegfried, 72
Schwenke, David, 30
Shi, Jainn J. (Roger), 78
Shum, C.K., 84
Song, Y. Tony, 84
Srivistava, Rakesh, 24
Suarez, Max, 72, 74
Suresh, Ambady, 24
Stein, Robert, 94

Takacs, Larry, 74
Tan, Qian, 76
Tang, Chun, 60, 102
Tao, Wei-Kuo, 78
Tejnil, Edward, 104
Terrill, Judith E., 112
Thompson, Richard, 46
Titov, Viacheslav, 80
To, Wai Ming, 24
Todling, Ricardo, 72, 74
Trumble, Kerry, 102

Van Meter, James, 92
Van Norman, John W., 62
Van Zante, Dale, 32
Vicker, Darby, 104

Watson, Michael, 64
White, Todd, 50, 60
Wood, William, 102
Wray, Alan, 30
Wright, Michael J., 50, 60

Yu, Hongbin, 76

Zhang, Shaoqing, 68
Zlotnicki, Victor, 84

For further information about NASA's High-End Computing Program, please contact:

Dr. Tsengdar Lee
Scientific Computing Portfolio Manager
NASA Science Mission Directorate
NASA Headquarters
(202) 358-0860
Tsengdar.J.Lee@nasa.gov

Dr. Rupak Biswas
High-End Computing Capability (HECC) Project Manager
NASA Advanced Supercomputing Division
NASA Ames Research Center
(650) 604-4411
Rupak.Biswas@nasa.gov

Dr. W. Phillip Webster
NASA Center for Computational Sciences (NCCS) Project Manager
Computational and Information Sciences and Technology Office
NASA Goddard Space Flight Center
(301) 286-9535
Phil.Webster@nasa.gov

Many colleagues at the HEC Program facilities contributed long hours and dedicated effort to producing this 2007–2008 High-End Computing Report. We are especially grateful to the technical publications teams at NAS and NCCS, whose hard work and expertise made this report possible. Thanks also to the principal investigators who contributed science and engineering highlights, and to reviewers at both facilities and within all mission directorates.

Executive Editor: Bryan Biegel
Writers/Editors: Holly Amundson, Jarrett Cohen, Jill Dunbar, John Evans, Harper Pryor, Lorien Wheeler
Graphic Designer: Sue Kim
Editorial and Design Consultants: Nick Bonifas, John Hardman, Marco Librero
Photographers: Dominic Hart, Pat Izzo, Sue Kim, Marco Librero

Trade names or manufacturers' names are used in this report for identification only. This usage does not constitute an official endorsement, either expressed or implied, by the National Aeronautics and Space Administration.

Images shown on back cover (from left to right):

- IBM DS4700 Fibre Channel drives provide online disk storage for the Discover Linux cluster at the NASA Center for Computational Sciences.
- Close-up of a front panel from the NASA Advanced Supercomputing facility's 14,336-processor core Columbia supercomputer, which enables timely computational results for many of NASA's scientific and engineering projects.
- The 51,200-processor core Pleiades supercomputer at the NASA Advanced Supercomputing facility is connected via an overhead trellis system containing over 20 miles of InfiniBand network cables.
- Each cabinet of the 6,656-processor core Discover Linux cluster at the NASA Center for Computational Sciences tightly couples processors via a high-speed InfiniBand network.

www.nasa.gov