The SIAM 100-Dollar, 100-Digit Challenge

The challenge consisted of ten numerical problems posted in the January/February 2002 issue of *SIAM News* and later publicized in *Science* and elsewhere. The answer to each problem was a single real number. Contestants could earn up to ten points for ten correct digits on each problem, a maximum of 100 points total.

See http://www.siam.org/siamnews/01-02/challenge.pdf to see the original *SIAM News* article and the problems.

Here are the correct numbers to forty digits:

Problem 1:   0.3233674316 7777876139 9370087952 1704466510...
Problem 2:   0.9952629194 4335416089 0311809426 7216210294...
Problem 3:   1.274224152 8212281882 1234063972 5078099472...   (thanks, Rolf Strebel!)
Problem 4:   -3.306868647 4752372800 7611377089 8515657166...
Problem 5:   0.2143352345 9045963946 1526400184 7493961134...
Problem 6: 0.06191395447 3990942848 1752164732 1217699963...
Problem 7:   0.7250783462 6840116746 8687719251 1609688691...
Problem 8:   0.4240113870 3368836379 7433668593 2564512477...
Problem 9:   0.7859336743 5037145456 5243986327 5455829623...
Problem 10: 0.3837587979 2512261034 0713318620 4839100793... x 10^{-6}

Ninety-four teams from twenty-five countries entered the competition. Of these, twenty teams scored 100 points and thus are counted as FIRST PRIZE WINNERS:

Folkmar BORNEMANN of the Technical University of Munich, Germany
Carl DeVORE, Toby DRISCOLL, Eli FAULKNER, Jon LEIGHTON, Sven REICHARD, and Lou ROSSI of the University of Delaware, USA
J. BOERSMA, J.K.M. JANSEN, F.H. SIMONS and F.W. STEUTEL of the Eindhoven University of Technology, Netherlands
Gaston GONNET of ETH-Zurich and Robert ISRAEL of the University of British Columbia
Thomas GRUND of the Technical University of Chemnitz, Germany
Gerhard KIRCHNER, Alexander OSTERMANN, Mechthild THALHAMMER, and Peter WAGNER of the University of Innsbruck, Austria
Gerd KUNERT and Ulf KÄHLER of the Technical University of Chemnitz, Germany
Dirk LAURIE of the University of Stellenbosch, South Africa
Danny KAPLAN and Stan WAGON of Macalester College, USA
Martin GANDER, Felix KWOK, Sebastien LOISEL, Nilima NIGAM, and Paul TUPPER of McGill University, Canada
Peter ROBINSON of Quintessa, Ltd., UK
Bernard BEARD, Marijke VAN GANS, and Brian MEDLEY of the Compuserve SCIMATH Forum
Kim McINTURFF of Raytheon and Peter SIMON of Space Systems/Loral, USA
Eric DUSSAUD, Chris HUSBAND, Hoang NGUYEN, Daniel REYNOLDS, and Christiaan STOLK of Rice University, USA
Rolf STREBEL and Oscar CHINELLATO of ETH-Zurich, Switzerland
Ruud VAN DAMME, Bernard GEURTS, and Bert JAGERS of the University of Twente, Netherlands
Glenn IERLEY, Stefan Llewellyn SMITH, and Robert PARKER of the University of California, San Diego, USA
Jingfang HUANG, Michael MINION and Michael TAYLOR of the University of North Carolina, USA
Eddy VAN DE WETERING, USA
P. ABBOTT of the University of Western Australia and B. CHAMPION, Y. HU, D. LICHTBLAU, and M. TROTT of Wolfram Research, Inc.

Three of the First Prize teams will be chosen quite arbitrarily to receive $100 each.
In addition, five teams scored 99 points and count as SECOND PRIZE WINNERS.

Niclas CARLSSON of the Åbo Akademi University, Finland
Michel KERN of Inria Rocquencourt, France
David SMITH of Loyola Marymount University, USA
Craig WIEGERT of the University of Chicago, USA
Katherine HEGEWISCH and Dirk ROBINSON of Washington State University, USA

The remaining 69 teams had scores throughout the range from 0 to 98.

An article about the problems and some of the top-scoring teams will appear in the July/August issue of *SIAM News*.

Meanwhile, some of the contestants have been publishing their solutions on the Web:

J. Boersma, J.K.M. Jansen, F.H. Simons, F.W. Steutel (http://www.win.tue.nl/scg/siamcontest/)

Bernard Beard, Marijke van Gans and Brian Medley (http://www.maxwellian.demon.co.uk/~marijke/SIAM2002/)

Folkmar Bornemann (http://www-m3.mathematik.tu-muenchen.de/m3/bornemann/index.html)

Dirk Laurie (http://dip.sun.ac.za/~laurie/)

Peter Robinson (http://www.quintessa.org/news.html)

Peter Simon and Kim McInturff (http://www.vcnet.com/~simonp/)

Stan Wagon (follow the SIAM Challenge link) (http://www.stanwagon.com/)