

Kris Stewart Credentials and Reference for UNM CyberInfrastructure Day 29April2011

Professor, Computer Science, San Diego State University, since 1984

<http://www.stewart.cs.sdsu.edu> since 1994, thank you NCSA Mosaic

Publications:

Bresciani, M.J., Morsi, K., Duncan, A., Tucker, M., Siprut, M., & Stewart, K.. "Exploring the Challenges in Designing and Implementing an Assessment Plan for a Virtual Engineering Lab.," *Eludamos: the Journal for Computer Game Culture*, v.4(2), 2010, p. 1.

K. Stewart, "3d Game Programming as Service-Learning for CS Students", Second Annual Consortium for Computing Sciences in Colleges, Southwestern Regional Conference Proceedings, April 2009, San Diego CA, pp. 246-251., Available online from ACM Portal <http://portal.acm.org/citation.cfm?id=1516586>

K. Stewart, "3d Game Programming as a Computer Science Service Learning Curriculum for High School Science Courses", ACM Special Interest Group in CS Education, 2007, Covington, KY, March 07.

K. Stewart, J Bowers, STEP: A Case Study on Building a Bridge between HPC Technologies and the Secondary Classroom, SC97 Education Program

<http://www.stewart.cs.sdsu.edu/SC97/>

Grants:

NSF DUE #0837162 Accessibility of Materials Laboratory Experience for Engineering Undergraduates , K. Morsi kmorsi@mail.sdsu.edu (Principal Investigator) , Kris Stewart (Co-Principal Investigator), Marilee Bresciani (Co-Principal Investigator), Mark Siprut (Co-Principal Investigator) Feb 2009-present

NSF OCI #520146 EPIC - Engaging People in Cyberinfrastructure, Roscoe Giles roscoe@bu.edu (Principal Investigator), CI-TEAM, 2005-06

Keck Undergraduate Computational Science Educational Consortium (KUCSEC) grant to Capital University, Columbus OH, Kris Stewart wrote on Computable Performance , 2006 Metrics <http://www.capital.edu/21424/Computational-Studies/7168/>

NSF OCI #9619020 National Partnership for Advanced Computational Infrastructure, Education Center for Computational Science & Engineering, CSU Participation at SDSU, Kris Stewart, 1997-2004

NSF CNS #9729574 CalREN-2: The California Research and Education Network- Phase 2 , David Ernst dernst@calstate.edu (Principal Investigator) , Thomas West (Former Principal Investigator) , Jack Paris (Co-Principal Investigator), Elhami Ibrahim (Co-Principal Investigator), Yasha Karant (Co-Principal Investigator), Gary Adams (Co-Principal Investigator), Kris Stewart (Co-Principal Investigator), March 1998

NSF OCI #9015552 Undergraduate Curriculum Development in Advanced Computing , Dan Sulzbach (Principal Investigator) General Atomics / San Diego Supercomputer Center, Kris Stewart does all curriculum development, organization and presentation Summer 1991/1992 Sept 1990

Bio

Dr. Stewart (Ph.D. "Semi-Implicit Backward Differentiation Formulas", University of New Mexico, 1987, Advisor: L.F. Shampine) has done research on mathematical software for ordinary differential equations and teaches courses on scientific problem solving, compiler construction, social & ethical issue in computing and 3d game programming at San Diego State University, where she joined the faculty in 1984. She has worked with the San Diego Supercomputer Center since 1986, first as a user, then as a Senior Fellow to develop curricular materials for the undergraduate supercomputing course at SDSU focusing on the Cray. In 1994 she received the Dept. of Energy Undergraduate Computational Science Award from the UCES program. She has given numerous presentations, a subset is:

3d Game Programming as Service Learning for CS students ACM SIG CSE 2007, Covington KY 10 March 2007

Computer Game Engines for Computational Science Curr. Development 11Aug06 Rochester, NY ICCSE 06
Wild World of Supercomputers: It's Not Just FLOPs, Computer and Computational Sciences Program for Minority Youth, CalTech, Pasadena CA 19Mar96

HPC Curriculum Development at SDSU using SDSC Resources (SC'95) Nov95, San Diego CA

HPC Curriculum Development: Web Browser for Developing, Presenting and Sharing Resources, MUSPIN Users Conference, Morgan State U, Baltimore MD 05Oct95

Education Issues in Scientific Computing, SCICADE95, Stanford U. 30Mar95

Dr. Stewart became Director of the Education Center for Computational Science & Engineering (EC/CSE) representing the California State University (CSU), and housed at San Diego State University in April 1997. This was part of the funding by the NSF for two national partnerships for advanced computing infrastructure, the rebirth of the NSF-assisted Supercomputer Centers Program. The National Partnership for Advanced Computing Infrastructure (NPACI) was led by the San Diego Supercomputer Center (SDSC) and includes partner institutions from academia, research institutions and private commercial concerns. The National Computational Science Alliance (NCSA) was centered in Urbana-Champaign, Illinois and comprises another broad ranging national partnership. Educators from both funded groups collaborated to form the Education, Outreach and Training (EOT-PACI) and fashion a national plan to facilitate the transfer of technology from the high performance sites among the partnerships to infuse the curriculum, especially at the undergraduate level.

<http://www.sdsc.edu/pub/envision/v14.1/edcenter.html>

http://www.sdsc.edu/pub/envision/v17.3/high_tech.html

<http://www.sdsc.edu/pub/envision/v20.1/Envision-2004.pdf> pp. 12-13

When NPACI ended, an opportunity to continue the EOT-PACI collaboration, with a focus on new topics, was found. Stewart was involved with the Visualization for Education proposal to investigate using the widely available 3d game engines to support curriculum. NSF the Office of CyberInfrastructure (OCI) provided one year funding to sponsor the partnership, EPIC, Engaging People in Cyberinfrastructure. A summary of the accomplishments in 2005/6 is found on line

<http://www.stewart.cs.sdsu.edu/EPIC05/sciences-report-june06/EdCenteronCSEcontinues-upd2.htm>

or from the SDSU College of Sciences 2006 Fusion report on pages 14 and 15

http://www.sci.sdsu.edu/cos/downloads/cos_fusion2006.pdf

Dr. Stewart worked at the Jet Propulsion Laboratory (JPL) from 1979 to 1981 after receiving her Masters Degree in Computer Science from SDSU. The software for her Masters project, SCRUNCH, translating Fortran math software to run on the PC in Basic, is still available from the National Institute of Standards and Technology (NIST)

<http://gams.nist.gov/cgi-bin/serve.cgi/Package/SCRUNCH/>

She was a consultant at the Los Alamos National Laboratory while working on her Ph.D. under Dr. Larry Shampine at the University of New Mexico (UNM) [1981-87].

Kris proud to be a Marine Corps brat and enjoys living in the same home for 27 years in a row after her hire at San Diego State University.