

## Curriculum Vitae David Albert Turner

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### Contact Information

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### Education

Ph.D. in Computer Science  
Eurecom Institute, Sophia Antipolis, France.  
Multimedia communications. (2001)

Master of Science in Mathematics  
University of Massachusetts, Amherst, Massachusetts.  
Emphasis on mathematical statistics. (1983)

Bachelor of Science in Mathematics  
Wichita State University, Wichita, Kansas.  
Mathematics major, physics and computer science minors. (1980)

### Professional Experience

Sep 2018 - Dec 2021:

Emeritus Professor of Computer Science and Engineering  
California State University, San Bernardino, CA.

- Part-time faculty, teaching courses on Web programming, video game programming, introductory computer science with C++.

Aug 2001 - Aug 2018:

Professor of Computer Science and Engineering (2011)

Associate Professor (2006)

Assistant Professor (2001)

California State University, San Bernardino, CA.

- With colleague Dr. Arturo Concepcion, managed the development of two large-scale video game development projects with students: a space shooter called Vector Force that runs on the XBox 360, and a 2D role playing game called Lacuna Reaver.
- Co-authored 6 papers on alternative currency systems in the years 2005 and 2006.
- Developed new courses on video game programming and Web programming.
- With co-author Dr. Jinseok Chae of University of Incheon, wrote *Java Web Programming with Eclipse* for use in university courses. Available in print and online formats.

## Curriculum Vitae of David Turner

- Primary designer and maintainer of the Bachelor of Arts in Computer Systems program at California State University San Bernardino. The program allows students to specialize in one of 5 application areas of computing: general interdisciplinary (requires integrative work with a minor field of study), Web programming, systems administration, game development, graphics programming.
- Served continuously on the Department's Undergraduate Curriculum Committee.
- Established and chaired the Department's Web Committee.
- Served on the University's Technology Advisory Committee.
- Taught the following courses: Introduction to Computer Science I and II (using C++), Java Programming, Data Structures (using C/C++), Algorithms Analysis, Web Services, Web Page Programming, Server Programming, Senior Seminar, Game Programming.
- Advised a large number of masters degree projects, primarily in the area of Web application development.
- Team leader for several commercial software development projects that involved students and other faculty.
- With colleague Dr. Arturo Concepcion, designed and developed a grant solicitation management system with students for the Office of Technology Transfer and Commercialization (San Bernardino, CA), and Center for Commercialization of Advanced Technology Southern California (San Diego, CA).
- With colleague Dr. Arturo Concepcion, designed and developed a content management system with students for Active Capital, Inc. (Irvine, CA)
- Designed, developed and operated an online registration system for the College of Extended Learning (CSUSB) with students.
- Lecturer at Advanced Institute of Information Technology, Seoul, Korea
  - Aug 2004: co-taught a one-week course for university professors on network programming.
  - Aug 2005: taught a one-week course for university professors on Web Service Development.

Sep 2016 - Aug 2017:

Director, School of Computer Science and Engineering  
California State University, San Bernardino, CA.

- Department chair for 14 full-time faculty and 880 declared computing majors, including computer science, computer engineering, bioinformatics, and computer systems.

1998 - 2001:

Teaching Assistant

Institut Eurecom, Sophia Antipolis, France.

- Developed eight hours of laboratory programming exercises for a course on Internet protocols.
- Laboratory instructor for three generations of European engineering students in their final year of undergraduate studies.
- Management of the following semester-long student prototype development projects:

## Curriculum Vitae of David Turner

- Internet voice email through the telephone. Integration of the telephony and IP network for the creation and delivery of voice e-mail. Spoken natural language interface. Access to user address book. Dialogic/Antares telephony board. Nuance speech objects API.
- Telephony-based voice message boards. Spoken natural language interface. Scalability through user specified filtering. Dialogic/Antares telephony board. Nuance speech objects API. Component architecture and persistent data with Java Enterprise Beans.
- Semi-synchronous multimedia messaging. Lossless, congestion-sensitive streaming of audio and video with TCP. Audio and video capture with the beta-version of the Java Media Framework 1.0.
- Sender-stored delivery of voice e-mail. Audio capture with the beta-version of the Java Media Framework 1.0, e-mail formatting and delivery with Java Mail 1.0, audio streaming by Realmedia server.
- Substitute lecturer for a course on Internet technology.
- Contributor to the textbook Computer Networking, by Jim Kurose and Keith Ross.

1998 - 2001:

Co-Founder of Wimba.com (acquired by Blackboard in 2010)

Sophia Antipolis, France.

- Prototype development of voice message board system.
- Developed the initial voice email system.
- Compression and transcoding of voice data.

1996 - 1997:

Lecturer and Computer Consultant

Seoul, South Korea.

- Lecturer in the Division of Practical English, Hankuk University of Foreign Studies.
- Technical Writing and commercial website development for Sigma Instruments Co., Inc.

1993 - 1996:

Contract Work

San Diego, California.

- Provided computer consultation and programming on a contract basis (database and financial analysis applications).
- Statistical research on the properties of financial markets and mechanical trading systems.
- Developed a commercial website for U.S. IRS Section 29 tax credits for the reduction of personal income tax through partnerships in the production of fuel from non-conventional means.

1989 - 1993:

Transportation Planner

Pioneer Valley Planning Commission, West Springfield, Massachusetts.

- Developed the agency's geographic information system and travel demand forecasting model.

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- Migrated municipal and state mainframe databases onto microcomputers.
- Incorporated federal census demographic TIGER files into GIS and travel demand model.
- Provided vehicular emissions forecasting and was responsible for planning study conformance to federal air quality regulations.
- Developed and managed agency computer resources, including a 10Base-T Ethernet network.

1987 - 1988:

Software Developer

New England Municipal Resource Center, Putney, VT.

- Developed a multi-user database processing system in Dbase III+ for town clerks in Massachusetts. The system manages voter registration, annual census, vital records (birth, death, marriage), street list, and various licenses and permits.

1984 - 1987:

Actuarial Assistant

Peerless Insurance Company, Keene, New Hampshire.

- Performed statistical analysis of casualty insurance data for rate determination.
- Developed software for generating insurance rating manuals.
- Provided computer support for the actuarial department, including report generation from mainframe data files.

9/81 - 6/83:

Teaching Assistant

University of Massachusetts, Amherst, Massachusetts.

- Taught courses in statistics, calculus, and linear algebra.

## Publications

Chris Ballinger, David Turner, Arturo Concepcion. Artificial Intelligence Design in a Multiplayer Online Role Playing Game. International Conference on Information Technology: New Generations (ITNG), Las Vegas, NV, April 2011.

Mark Chapman, David Turner, Arturo Concepcion, Aldo Lewis. VectorForce: A Video Game Project. International Conference on Information Technology: New Generations (ITNG), Las Vegas, NV, April 2011.

Tong Lai Yu, David Turner, David Stover, Arturo Concepcion. Incorporating Video in Platform-Independent Video Games Using Open-Source Software. Proceedings of the 2010 Third IEEE International Conference on Computer Science and Information Technology, p. 466-470, Chengdu, China, July 2010.

## Curriculum Vitae of David Turner

N. Navaroli, D. Turner, A. Concepcion, R. Lynch. Performance Comparison of ADRS and PCA as a Preprocessor to ANN for Data Mining. The 8th International Conference on Intelligent Systems Design and Applications (ISDA 2008), Nov 2008, Kaohsiung, Taiwan.

David Turner, Moonju Park, Jaehwan Kim and Jinseok Chae. An Automated Test Code Generation Method for Web Applications using Activity Oriented Approach. 23rd IEEE/ACM International Conference on Automated Software Engineering, Aquila, Italy, Sep. 2008.

D. Patterson, F. Liu, D. Turner, A. Concepcion, R. Lynch. Performance Comparison of the Automatic Data Reduction System. Proceedings of the SPIE Symposium on Defense and Security, Orlando, FL, March 2008.

Jussi Kangasharju, Keith W. Ross and David A. Turner. Optimizing File Availability in Peer-to-Peer Content Distribution. INFOCOM, May 2007, Anchorage, Alaska.

Jussi Kangasharju, Keith W. Ross and David A. Turner. Adaptive Content Management in Structured P2P Communities. First International Conference on Scalable Information Systems, May 2006, Hong Kong.

David Turner. Web Page Caching in Java Web Applications. In proceedings of International Conference on Information Technology Coding and Computing (ITCC 2005), Las Vegas, NV, Apr 2005.

Yiyao Hao, Daniel Havey and David Turner. An Exchange Protocol for Alternative Currencies. In proceedings of International Conference on Information Technology Coding and Computing (ITCC 2005), Las Vegas, NV, Apr 2005.

Elharith Elrufaie and David Turner. A Wiki Paradigm for Use in IT Courses. In proceedings of International Conference on Information Technology Coding and Computing (ITCC 2005), Las Vegas, NV, Apr 2005.

M. Adler, R. Kumar, K. Ross, D. Rubenstein, D. Turner, D. Yao. Optimal Peer Selection in a Free-Market Peer-Resource Economy. Second Workshop on the Economics of Peer-to-Peer Systems, Harvard University, Cambridge, MA, Jun 2004.

David A. Turner and Keith W. Ross. A Lightweight Currency Paradigm for the P2P Resource Market. Seventh International Conference on Electronic Commerce Research, Dallas, TX, Jun 2004.

David Turner and Ni Deng. Payment-Based Email, 5th International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD2004), Beijing, China, Jun/Jul 2004.

## Curriculum Vitae of David Turner

Chien-min Wang and David Turner. Extending the Wiki Paradigm for Use in the Classroom, International Conference on Information Technology (ITCC 2004), Las Vegas, NV, Apr 2004.

Elharith Elrifaie and David Turner. Bidding in P2P Content Distribution Networks Using the Lightweight Currency Paradigm, International Conference on Information Technology (ITCC 2004), Las Vegas, NV, Apr 2004.

David Turner and Daniel Havey. Controlling Spam through Lightweight Currency. In proceedings of the Hawaii International Conference on Computer Sciences, Honolulu, HI, Jan 2004.

Jussi Kangasharju, Keith W. Ross, David A. Turner. Secure and Resilient Peer-to-Peer E-Mail: Design and Implementation. In proceedings of the Third IEEE International Conference on Peer-to-Peer Computing, Linkoping, Sweden, Sep 2003.

David Turner, Daniel Havey and John Ewart. Allocating Resources in Storage Cooperatives with Pseudo Currencies. In proceedings of the International Conference on Computer Science and its Applications, San Diego, CA, July 2003.

David A. Turner and Keith W. Ross. Adaptive Streaming of Layer-Encoded Multimedia Presentations. In Journal of VLSI Signal Processing-Systems for Signal, Image, and Video Technology, May/June 2003, pp. 83-99.

David A. Turner. Optimal Streaming of Stored Scalable Media. Proceedings of the Multimedia Technologies and Applications Conference (MTAC 2001), University of California, Irvine, CA, Nov 7-9, 2001.

David A. Turner. Asynchronous Multimedia Messaging. Ph.D. dissertation, the Eurecom Institute (ENST/Telecom Paris), Jun 2001.

David A. Turner and Keith W. Ross. A Comprehensive Architecture for Continuous Media E-Mail on the Internet. IEEE MultiMedia, Apr/Jun 2001, pp. 88-98.

David A. Turner and Keith W. Ross. Continuous Media E-mail on the Internet: Infrastructure Inadequacies and a Sender-Side Solution. IEEE Network, Jul/Aug 2000.

David A. Turner and Keith W. Ross. Optimal Streaming of Layer-Encoded Multimedia Presentations. Proceedings of the IEEE International Conference on Multimedia and Expo, New York, New York, Jul/Aug 2000.

David A. Turner and Keith W. Ross. Asynchronous Audio Conferencing on the Web. In Advances in Intelligent Computing and Multimedia Systems, Baden-Baden, Germany, Aug 1999.

## Curriculum Vitae of David Turner

David A. Turner and Keith W. Ross. Optimal Streaming of Synchronized Multimedia Presentations. In proceedings of ACM Multimedia 99, Orlando, Florida, Oct 1999.

### External Grants

Project title: Bayesian Data Reduction Algorithm Project.

Project directors: Arturo Concepcion, Co-PI: David Turner.

Amount awarded: \$25,000, duration: 4 months, 4/1/2006 - 7/31/2006.

Agency: CSUSB Office of Technology Transfer and Commercialization, Grant #GT60657.

Project title: Commercialization of the Bayesian Data Reduction Algorithm.

Project directors: Arturo Concepcion, Co-PI: David Turner.

Amount awarded: \$18,000, duration: 4 months, 4/1/2007 - 7/31/2007.

Agency: CSUSB Office of Technology Transfer and Commercialization, follow-on grant to #GT60657.

Project title: Revitalizing Computing Education through Community-Based Video Game Development Projects.

Project directors: David Turner, Co-PIs: Arturo Concepcion, Tong Yu.

Amount awarded: \$295,256, duration: 24 months, 9/1/2009 - 8/31/2011.

Agency: United States National Science Foundation.

Program: CISE Pathways to Revitalized Undergraduate Computing Education.

Project title: CPATH-1 RET Supplement.

Project director: David Turner, Co-PIs: Arturo Concepcion, Tong Yu.

Amount awarded: \$25,000, duration: 12 months, expires 8/31/2011.

Agency: United States National Science Foundation.

Program: Research Experiences for Teachers.

Project title: CPATH-1 REU Supplement.

Project director: David Turner, Co-PIs: Arturo Concepcion, Tong Yu.

Amount awarded: \$16,000, duration: 12 months, expires 8/31/2011.

Agency: United States National Science Foundation.

Program: Research Experiences for Undergraduates.

### Participation in External Grants Funded Through Subcontracts

Project title: CCRAA (College Cost Reduction and Access Act) Step Up to Success.

Lead institution: Riverside Community College.

Award amount: \$227,945. Duration: 2009-2010.

Agency: United States Department of Education.

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Project title: Habilidades Unidos: Transdisciplinary Cooperation for Academic and Career Success.

Lead institution: Norco College.

Award amount: \$3,871,911. Duration: Spring 2011 - Winter 2016.

Agency: United States Department of Education.

Program: Strengthening Institutions -- Hispanic Serving Institutions program.

### **Internal Grants**

Project Title: Game Programming.

Project director: David Turner.

Amount: \$5,000. Duration: Summer 2006.

Funding source: CSUSB Teaching Resource Center.

Project title: Collaborating through Team Teaching.

Project directors: Kerstin Voigt and David Turner.

Amount: \$8,400. Duration: Winter and Spring 2009.

Funding source: CSUSB Teaching Resource Center.

Project title: A Map-Based Interface to the Fau Library Archive of Water-Related Artifacts.

Project director: David Turner.

Amount: \$19,000. Duration: 24 weeks. Start date: Spring 2006.

Funding source: CSUSB Water Resources Institute.

Program: Summer Research Pod.

Project director: David Turner.

Amount: \$7,000. Duration: Summer 2006.

Funding source: CSUSB College of Natural Sciences.

Project Title: Multiplayer Role Playing Game Research and Development Project.

Project director: David Turner.

Amount: \$12,800. Duration: Summer 2008.

Funding source: CSUSB College of Natural Sciences.

Program: Summer Research Pod.