# DAVID L. FERRO

Dean, College of Engineering, Applied Science & Technology
Faculty, Computer Science - School of Computing
Weber State University

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## EDUCATION
| | |
|---|---|
| 2001 | Ph.D., Science and Technology Studies, Center for Interdisciplinary Studies, Virginia Tech, VA |
| 1995 | MS, Science and Technology Studies, Center for Interdisciplinary Studies, Virginia Tech, VA |
| 1984 | BS, Computer Science, University of Lowell, MA |

## ACADEMIC POSITIONS

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|---|---|
| 2011-present | Dean, Engineering, Applied Science & Technology, Weber State University, Ogden, UT |
| 2016-present | Full Professor, Computer Science, Weber State University, Ogden, UT |
| 2011 | Visiting Professor at Shanghai Normal University, Shanghai, China |
| 2007-2016 | Associate Professor, Computer Science, Weber State University, Ogden, UT |
| 2007 | Visiting Professor at the Computer-Human Interaction Unit of the Department of Computer Science at the University of Tampere, Tampere, Finland. |
| 2001-2007 | Assistant Professor, Department of Computer Science, Weber State University, Ogden, UT |
| 1998 | Instructor, Department of English, Virginia Tech, Blacksburg, VA. With James Collier: built and co-taught online English 3764. |
| 1996-1998 | Visiting Research Scholar at the University of Pennsylvania Center for the History and Sociology of Science, Philadelphia, PA |
| 1994 – 1995 | Reference Librarian, Newman Library, Virginia Tech, Blacksburg, VA. |
| 1992 – 1995 | Graduate Assistant, Department of Sociology, Virginia Tech, Blacksburg, VA. |

## BOOK PUBLICATIONS
| | |
|---|---|
| 2022 | Swedin, Eric G. and David L. Ferro, *The Computer: A Brief History of the Machine That Changed the World.* Westport, CT: Greenwood Press. |

2011          Ferro, David L. and Eric Swedin (eds), *Science Fiction and Computing: Essays on Interlinked Domains*. Baltimore: McFarland Publishing, Jefferson, North Carolina.

2010          Anderson, Greg, David L. Ferro, and Robert Hilton, *Connecting with Computer Science, Second Edition*.  Boston: Thomson Course Technologies.

2007          Swedin, Eric and David L. Ferro, *Computers, The Life Story of a Technology*. Baltimore MD: Johns Hopkins University Press (2005, reissue as Trade paperback).

2005          Anderson, Greg, David L. Ferro, and Robert Hilton, *Connecting with Computer Science*. Boston: Thomson Course Technologies.

2005          Swedin, Eric and David L. Ferro, *Computers, The Life Story of a Technology*. Westport, CT: Greenwood Press.
                   Reviewed in *MBR Bookwatch* 4: 7 (July 2005).
                   Reviewed in *SciTech Books News* (September 2005).
                   Reviewed in *Choice* (November 2005).  "Highly recommended."
                   Noted in *IEEE Annals of the History of Computing* 27:4 (Oct-Dec, 2005), 87.
                   Reviewed in *Communications Booknotes Quarterly* 37:2 (Spring 2006), 105.

## ARTICLE PUBLICATIONS

2015          Swedin, Eric G and David L. Ferro, "Murray Leinster and 'A Logic Named Joe'," *Literary Criticism* (Gale, 2015).  Reprint of chapter in David L. Ferro and Eric G. Swedin, editors, *Science Fiction and Computing: Essays on Interlinked Domains* (McFarland, 2011).

2013          Swedin, Eric G and David L. Ferro, "Connections: Networking Computers Together," in Tessa Joseph-Nicholas, editor, *Introduction to Digital Culture: Living and Thinking in an Information Ag*e (Cognella, 2013).  Reprint of chapter in Eric G. Swedin and David L. Ferro, *Computers: The Life Story of a Technology* (Greenwood Press, 2005).

2011          Ferro, David L. and Eric G. Swedin.  "Rebooting 'A Logic Named Joe': Exploring the Multiple  Influences of a Strangely Predictive Mid–1940s Short Story," in McFarland Publishing Volume *Science Fiction and the Prediction of the Future*, by Gary Westfahl, Wong Kin Yuen, and Amy Chan Kit Sze (eds).

2009          Eisenhauer, Joseph G., Doris Geide-Stevenson, and David L. Ferro. "Experimental Estimates of Taxpayer Ethics" in *Review of Social Economy*, Sept. 2009.

2009          Ferro, David L. "Computerfiction: 'A Logic Named Joe' as Catalyst for a Cross-cultural Initial Investigation into the Importance of Science Fiction in the Historical Development of Computing." *In History of Nordic Computing II Conference Proceedings*.

2008          Räihä, Kari-Jouko, Saila Ovaska and David Ferro. "Observations on Using Clickers for Peer Evaluation." In Carlo Giovannella, Paula Kotze, and William Wong (Eds), *Architecting the Future – Proceedings of HCIEd 2008, Annual International Conference of HCI Educators*, Rome, Italy, April 2008, 127-134.  Published in the *Magazine of Interaction Design and*

*Architecture(s) II-III*: 3&4, Winter 2007-Spring 2008.  Interaction Design & Architecture(s) IxD&A, Scuola IaD, Universita di Roma Tor Vergata, Italy.

2003    Swedin, Eric and David L. Ferro. "Internet." *Encyclopedia of 20th Century Technology*. London: Fitzroy Dearborn Publishers.

2002    Oviatt, Sharon, Phil Cohen, Lizhong Wu, Lisbeth Duncan, Bernhard Suhm, Josh Bers, Thomas Holzman, Terry Winograd, James Landay, Jim Larson, and David Ferro. "Designing the User Interface for Multimodal Speech and Gesture Applications: State-of-the-Art Systems and Research Directions for 2000 and Beyond," in John M. Carroll (ed.) *Human-Computer Interaction in the New Millennium*, pp. 419-456. Reading, MA: Addison-Wesley.

2000    Oviatt, Sharon, Phil Cohen, Lizhong Wu, Lisbeth Duncan, Bernhard Suhm, Josh Bers, Thomas Holzman, Terry Winograd, James Landay, Jim Larson, and David Ferro. "Designing the User Interface for Multimodal Speech and Pen-Based Gesture Applications: State-of-the-Art Systems and Future Research Directions."  *Human-Computer Interaction*, 15(4), pp. 263-322.

1999    Larson, J. A., S. L. Oviatt and D. Ferro. "Designing the User Interface for Pen and Speech Applications," *Proceedings: CHI '99 Workshop, Conference on Human Factors in Computing*, Philadelphia, PA.


## OTHER PUBLICATIONS
2016-2023    Monthly 750-word column (over 70 published) in the Ogden *Standard Examiner*.

2016    Book Review: Joshua Raulerson, *Singularities: Technoculture, Transhumanism, and Science Fiction in the 21st Century*.  Liverpool, UK: Liverpool University Press, 2013. Reviewed in *Technology & Culture*, January 2016.  Vol. 57.  p.285-286.

2012    Book Review: Philippe Breton. *The Culture of the Internet and the Internet as Cult: Social Fears and Religious Fantasies*. By Philippe Breton. Duluth, Minn.: Litwin Books, 2011. Pp. xv+169.  Reviewed in *Technology & Culture*, July 2012.  Vol. 53.  p.747-749.

## SELECTED PRESENTATIONS
2023    Ferro, David, panel with Aniza Brown, Enos Cummings, Tamara Humphrey, Tamara Tran, and moderator Chanel Flores. "Building the World's Premier Ecosystem for Aerospace, Defense, and Security Companies," OneUtah Summit, May 5, 2023.

2023    Ferro, David. "Engineering Education and Industry," Ogden Breakfast Exchange Club on University/Business/Government Relations, Ogden, January 12, 2023.

2022    Ferro, David, panel with James Taylor, Ravi Krovi, and panel chair Dr. Dolores Kuchina-Musina. "Wildcat Offense: How Weber State Fights Convention to Build a Sustainable Innovation Movement," Defense Entrepreneurs Forum (DEF), San Francisco, October 5, 2022.

2021    Ferro, David, "CS Flex - A Unique Approach to Instruction," Engineering Dean's Institute, (virtual), April, 2022.

2017    Ferro, David, "Amazon Alexa as Teaching Tool," Engineering Dean's Institute, Miami, April, 2017.

2011    Ferro, David L. and Eric Swedin. "Speculative Fiction as a Component of STEM Recruitment," Society for the History of Technology (SHOT) and Society for the Study of Science in Society Special Interest GroupsPtometheans and International Network for Engineering Studies Joint Workshop, November 2, 2011.

2010    Ferro, David L. (Chair) "Examining the Interaction of Speculative Literature and Computing: Toward a Research Agenda," Society for the History of Technology (SHOT) Special Interest Group on Computer Information Systems (SIGCIS), October 3, 2010.

2007    Ferro, David L. (Keynote Speech) "My Country or Yours?  The Promise and Unknowns of Community Source," Sixth International Conference on Perspectives on Business Informatics Research (BIR), University of Tampere, Finland, October 2, 2007.

2007    Ferro, David L. "Science Fiction and Computing Development in U.S. and Finland," History of Nordic Computing 2nd (HiNC2), August 21-23, Turku, Finland.  Subsequently invited to speak at University of Turku, Finland, and University of Pori, Finland, fall 2007.

2006    Ferro, David L. "Missing the Future? Murray Leinster, Vernor Vinge, and Science Fiction's Prescient and Less-Than-Prescient Views of Open Source, Networks, and Personal Computers," Society for Social Studies of Science Annual Meeting.  November 1-5, Vancouver, B.C., Canada.

2005    Ferro, David L. "Computer History Museums." First Annual WSU Faculty Research Forum, Weber State University, Ogden, UT.

2003    Ferro, David L. (Chair). "Addressing Gender in Online Computer Science Course Instruction." Birds of a Feather Session, ACM SIGCSE Annual Conference, Reno, NV.

1999    Larson, J.A., S. L. Oviatt, and D. Ferro. "Designing the User Interface for Pen and Speech Applications."  ACM SIGCHI Annual Conference Workshop and Proceedings Abstract. CHI '99 Workshop, Conference on Human Factors in Computing, Philadelphia, PA.

1999    Ferro, David L. "Natural Bridge: The Use of Voice Recognition and Natural Language in the Aphasia Therapy System." Center for Interdisciplinary Studies Thursday Lecture Series, Virginia Tech, Blacksburg, VA.

1997    Ferro, David L. "Doing Ethnography from Deep Within: A High Tech Case." Society for Social Studies of Science (4S) Annual Meeting, Tucson, AZ.

1996              Ferro, David L. "The Commodification of Science through the Colonial American Newspaper." Social Studies in History Association (SSHA) Conference, New Orleans, LA.

1996              Ferro, David L. (Facilitator), "Information Technology" session. Practicing Policy Workshop, Virginia Tech, Blacksburg, VA.

1995              Ferro, David L. (and Chair), "Coming of Age in the Multimedia Lab," Society for Social Studies of Science (4S) Annual Meeting, Charlottesville, VA.

1995              Ferro, David L. (Chair), "Information Technology in Environmental Engineering." Virginia Tech Science Policy Discussion Group Annual Conference, Blacksburg, VA.

1993              Ferro, David L. (Chair), "Information Networks." Society for Social Studies of Science (4S) Annual Meeting, West Lafayette, IN.

1993              Ferro, David L., "The Social Construction of Science in Colonial America: the Popularization of Science Through Franklin's Pennsylvania Gazette."  Inquiries in Social Construction Conference, Durham, NH.

## GRANTS AND APPROPRIATIONS (PI or co-PI)
2024   NSF - EPIIC (National Science Foundation - Enabling Partnerships to Increase Innovation Capacity), $450,000 one-time with James Taylor and Ben Garcia.
2024   Utah State Legislative Appropriation: Educating High-Temperature Materials Engineers for Hypersonics, $1,450,000 one-time (half to Utah State University).
2023   Utah State Legislative Appropriation: Missile and Energy Research Center, $20,000,000 one-time.
2022   Utah State Legislative Appropriation: Center of Advanced Composite Materials and Structures, $350,000 annual and $500,000 one-time (half of both to Utah State University).
2022   Utah System of Higher Education/State Legislature Engineering Initiative, $620,000 annual.
2021   US Economic Development Administration (EDA) grant - Northern Utah Accelerator for Aerospace, Advanced Manufacturing, Materials, and Outdoor Equipment, $700,000.
2020   Governor's Office of Economic Development: Systems Engineering Initiative, $200,000 annual, $22,000 one-time.
2019   Utah System of Higher Education/State Legislature Engineering Initiative, $400,000 annual.
2017   Utah System of Higher Education/State Legislature Engineering Initiative, $840,000 annual.
2015   Utah System of Higher Education/State Legislature Engineering Initiative, $440,000 annual, $140,000 one-time.
2012   Utah System of Higher Education/State Legislature Engineering Initiative, $174,000 annual.
2010   USTAR (Utah Science, Technology, and Research Initiative) 'Hypersphere Project' with Ryan Thomas and Craig Gundy, $20,000.
2010   RS&PG Archival Research, $2,500.
2010   RS&PG Hemingway (Jordan Hamson-Utley, principal), $5,993.
2010   Teaching and Learning Grant, $500
2009   Honors-Eccles Fellowship, ~$10,000.
2007   RS&PG Hemingway Weber Writes Grant, ~$4,000 (4 credit course reduction)
2006   Special Grant from CIO Don Gardiner for Information Technology Display, $4,000.
2006   RS&PG Hemingway Grant: Research at Syracuse University Archives, $4,200.
2005   ARCC Dee Family Grant: Information Technology Display, $4,000.
2004   ARCC Dee Family Grant: Information Technology Display, $6,000.
2004   RS&PG Hemingway Grant: Research at Computer History Museums, $1,200.
2003   ARCC Dee Family Grant: Smart Detection Agents, $3,000.
2002   ARCC Dee Family Grant: Screen Recorder for Tutorials, $1,192.

## HONORS AND AWARDS
2015   Hemingway Faculty Excellence/Collaborative award for WSU PREP
2011   Nominated, Crystal Crest Award for Master Teacher
2010   Weber State University Faculty Governance Award.
2008   Utah System of Higher Education (USHE) Faculty Award for Technology in Pedagogy.
2008   Nominated, John A. Lindquist Award for Civic Engagement.
2006   Nominated, Crystal Crest Award for Master Teacher.
2003   First place for COAST CS2350 Students for WSU Undergraduate Research Symposium.

## PROFESSIONAL SERVICE
2024-present   Honorary Commander, 309th Air Force Sustainment Center / Software Directorate, Hill Air Force Base, Utah.
2023-present   Chair, ASEE Engineering Technology National Forum (ETNF)

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| 2023-present | Board member, ASEE Engineering Technology Leadership Institute (ETLI) |
| 2021-2023 | Honorary Commander, 421 Squadron, 388 FW, Hill Air Force Base, Utah. |
| 2023-present | Board of Directors, Miller Advanced Research and Solutions center (MARS) |
| 2022-2023 | Board of Directors, Missile and Energy Research Center (MERC) |
| 2014-present | Board of Directors, Utah Advanced Materials and Manufacturing Initiative (UAMMI) |
| 2010-2014 | Member of board of directors for Ferro, Gundy & Thomas. |
| 2009 | Tenure Review for Dr. David Toomey, University of Massachusetts, Amherst, MA. |
| 2009 | Tenure Review for Dr. Thomas Haigh, University of Wisconsin, Milwaukee, School of Information Studies, Milwaukee, WI. |
| 2007 | Events & Sightings write-up for the IEEE Annals of the History of Computing (October-December 2007) |

## SIGNIFICANT UNIVERSITY SERVICE
*Weber State University*

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| 2022-present | Dean Liaison, RSPG |
| 2020-2022 | Dean Liaison, APAFT |
| 2018-2020 | Dean's Liaison, Classroom Scheduling Software Implementation Team |
| 2018-2020 | Dean Liaison, Environmental Issues Committee |
| 2015-present | Member, University Risk Management Committee |
| 2015-2016 | Dean Liaison, Academic Resources and Computing Committee |
| 2014-2022 | Chair, University Scholarship Committee |
| 2014-present | Member Information Security Task Force |
| 2012-2021 | Co-Chair, IT Academic Portfolio |
| 2012 | Member, Alumni Director Search Committee |
| 2011-2015 | Dean Liaison, University Scholarship Committee |
| 2011-2105 | Dean Liaison, Salary and Benefits Committee |
| 2011-present | Member, Dean's Council |
| 2011 | Member of Dean Search Committee, College of Science |
| 2010-2013 | Student Fee Recommendation Committee (SFRC) |
| 2010 | Computer Science Department Peer Review Committee |
| 2009-2014 | Community-Based Learning (CBL) Curriculum Committee |
| 2009-2011 | CIVITAS Steering Committee |
| 2009-2011 | Member of Student Affairs Faculty Advisory Committee |
| 2008-2010 | Chair & President, Faculty Senate |
| 2008-2010 | Ad hoc Member, WSU Board of Trustees and Academic Subcommittee |
| 2008-2010 | Member, WSU Alumni Association Board of Directors, |
| 2008-2010 | Member, WSU Strategic Planning Council |
| 2006-2009 | Liaison, Academic Resources and Computer Committee, Faculty Senate |
| 2009-2010 | Liaison, Ecological Initiatives Committee, Faculty Senate |
| 2009-2010 | Member, Board of Trustees Academic Subcommittee |
| 2008-2011 | Member, Salary Committee, Faculty Senate |
| 2008-2011 | Member, ITAC Information Technology Advisory Council |
| 2008-present | Member, IT Security Task Force |
| 2008-2011 | Chair, COAST College Ranking Tenure Review Committee |
| 2008-2010 | Member, Dean's Council |
| 2007-2015 | Co-chair, ITintheUniversity Colloquium Series |

| 2006-2010 | Member, Executive Committee, Faculty Senate |
| 2005-2006 | Chair, IT investigative committee |
| 2004-2010 | Senator, Faculty Senate |
| 2003-2007 | Member, Information Technology Council |
| 2003-2006 | Chair, Academic Resources and Computing Committee |
| 2002-2003 | Member, COAST College Curriculum Committee |
| 2002-2006 | Member, WebCT/Vista technology transfer project team |
| 2002-2006 | Member, WebCT/Vista Course Evaluation project team |

## OTHER SERVICE
*Weber State University*
. Assisted/Coordinated/Coached/Presented in various COAST/EAST outreach activities, FLL, FTC, Science Olympiad, Parent/Daughter Engineering, Summer PREP, more, 2011-present.
. Led visiting students to COAST from WSU Children's School, Evergreen Montessori, Shadow Valley Elementary, yearly since 2005.
. Digital History Archive Timeline created and installed, Ogden & Davis, fall 2012.
. Digital History Archive (DHA) re-installed at Davis in fall of 2010.
. Initiated two students in Visual Arts to work on DHA for capstone projects (ongoing).
. Visiting member for state-wide selection of a course management system (CMS), meeting, spring 2010, University of Utah.
. Real Men Can Cook, September 2004 – 2012.
. Assisted Economics Department with students from CS2350 and 2450 class, fall 2010, spring 2011. Organized Honors 3900 class trip to Seattle, fall 2010.
. Member of BIS capstone for James Alexander, spring 2009.
. Speaker at Student Senate, "How Faculty Governance Works," 2008, 2009.
. Hosted Student Government Executive Committee, fall and spring 2008, 2009.
. Pilot participant for Moodle Course Management System, summer, fall, spring of 2009 – 2011.

## SELECTED GUEST LECTURES AND SPEAKING ENGAGEMENTS
*Weber State University*
. Presenter (with Eric Swedin), "The History of Computers in Utah" Weber Historical Society, March 2024.
. Presenter (with Eric Swedin), "Science Fiction and Computing", Digital Humanities Brown Bag, 2016.
. Speaker, National Defense Industrial Association, WSU, 2015.
. Panelist, Faculty Forum, "MOOCS and other 'threats' to higher education", April, 2013.
. Speaker, "Proto-computer" at WSU Greek Festival, Sept 22, 2011.
. Presenter (with Eric Swedin), "The Intersection of Science, Fiction, and Politics at *The New York Times* "Times Talk," fall 2010.
. Panelist in Faculty Development Session "The Future of the Book", spring 2010.
. Honors Eccles Fellows presentation, Feb. 2010.
. Guest Lecture, Intercultural Communication Class in Dept. of Communications, September 7, 2010.
. Guest Lectures, History of Science in Department of History, Feb. 2010, 2011.
. Speaker on Martin Luther King round table discussion on MLK day, 2009.
. Panelist at Weber Reads, "Frankenstein and the Information Age: Technology Out of Control?" (with Luke Fernandez, Judy King, and Jonathan Karras), February, 2009.
. Speaker at WSU Technology Forum, spring 2009: "Using Clickers in the classroom."

. Speaker, "Antikythera Device" at WSU Greek Festival, Sept.15, 2009.
. Presenter (with Luke Fernandez and Mark Stevenson) on electronic mediated education at *The New York Times* "Times Talk," fall 2009.
. Speaker at the University Breakfast, fall 2008 and 2009.
. Speaker at the New Faculty Retreat, fall 2008 and 2009.
. Speaker at the opening session for Adjunct Faculty Retreat, winter 2009.
. Panelist, "The Death of the University" for the Teaching and Learning Forum. November, 2009.
. Presenter at WSU Faculty Forum on Second Life, Oct. 2009 (with Kami Hansen).
. Presenter at WSU Faculty Forum on "Incentivizing Scientists through SF," spring 2006.

*Other speaking engagements*
. Speaker, FIRST Robotics Competition, Maverick Center, March 2017 and 2018.
. Speaker/Coordinator, Western Pathways panel of Engineering Education, SLC, June 2018.
. Presenter and Panel Participant, numerous sessions, "Life, The Universe, and Everything, Conference on Science Fiction". BYU, February, 2006 – 2012.
. Panelist at WestCon (with Eric Swedin), spring 2009.

**TEACHING EXPERIENCE**
*Weber State University*
CS 1020: Introduction to computing
CS 1030: Introduction to computing
CS 1030 (online): Introduction to computing
CS 1400: Introduction to programming, C & Unix
CS 2750: Object Oriented Analysis and Design
CS 2450: Software Engineering I
CS 2350: Internet Programming
CS 3350: Internet Programming
CS 3350 (online): Internet Programming
Math 1140: Discrete Mathematics
Math 1630: Discrete Mathematics
Math 1630 (online): Discrete Mathematics
CS 4830: (variable title) Social Implications of Computing
CS 4830: (variable title) The User Experience
History 4810: History of Technology
IST 1100: Wired Society
Honors 3900: Science Fiction and History of Science and Technology
Honors 2120: Great Ideas of the West: The Computer Age
Honors 1700: The Social History of World War II
Honors 1520: Military History of World War II
Honors 2920: Reading the Newspaper, Sp'18
ETC 2001: Engineering Culture

**PROFESSIONAL WORK EXPERIENCE IN INDUSTRY**
May 2000 – August 2001
Senior Manager of e-Business Operations, IOMEGA, Roy, UT.

Managed seven person department that conducted email, banner, newsletter, and competitive price marketing campaigns; created and coded content for Iomega.com; managed 4.5 million registration database; analyzed click through, purchasing usability and demographic behavior.  Redesigned Iomega.com as international.  Operations lead in Blue Martini platform transition. Managed a 3.6 million dollar budget.  Coded in HTML, Javascript, Java.

June 1999 – July 2000
Co-Founder and VP of Product Management, EXPERTSERVICES.COM, Wilmington, DE.
Managed projects using IIS, ActiveX, Javascript, MS SQL and Apache, Perl, Java, Oracle.  Conducted market, competition and usability research and analysis; developed partnerships; managed QA; co-wrote business plans for b2c and b2b web products.

November 1995 – June 2000
Principle/Staff Engineer UNISYS CORPORATION, Paoli, PA.
Developed tools for integrating voice recognition, natural language processing, telephony, and internet.  Developed patent submitted process for voice-integrated applications. On-partner-site project leader for jointly developed voice application.  Lead developer and system manager for NIH funded research studying aphasia patients.  Designed and conducted HCI analysis.  Created documentation and taught course material.  Worked with Java, C++, Visual Basic, Prolog, Oracle on NT, Sun, Periphonics, Dialogic equipment and integrated recognizers including L&H, AT&T, IBM, Dragon, Philips, Nuance.

September 1990 – December 1991
Software Consultant, TECHNICAL OUTREACH GROUP, Melrose, MA.
Assisted non-profit organizations in software system design, procurement, development and integration; an outgrowth of the philanthropic group I founded at Lotus Development.

March 1989 – September 1990
Programmer, LOTUS DEVELOPMENT, Cambridge, MA.
Project leader Developing Electronic Update Systems for financial databases on CD ROM incorporating VAX's and Novell Networked PC's.  Drafted operation procedures and programmer documentation for a Stocks and Bonds database.  Worked in Hungarian C and proprietary object-oriented database language.

December 1986 - March 1989
Developer/Programmer, DRI/MCGRAW-HILL, Lexington, MA
Administered and enhanced Interleaf/Publishing System on SUN/UNIX Network.  Designed and developed econometric forecasting products and utilities.  Developed customer applications and related documentation.  Created course material and provided in-house instruction on product use.  Worked in C, database, communication, and econometric modeling products, on the PC and Burroughs mainframe.

February 1985 - June 1986
Programmer/Developer, COMPUTER IDENTICS, Canton, MA.
Designed integrated programs in C and databases for 68000 based systems.  Developed turnkey applications and was a customer liaison for company bar code systems.  Developed and extensively documented a language/compiler in C and assembler on UNIX system and ported to PC.

June 1984 - January 1985

Programmer/Developer, AOG SYSTEMS, Littleton, MA.
   Developed prototype expert system product in Unify database environment. Co-managed Unix
   operating system. Wrote documentation for database utilities. Worked on Dual 83/80, CP/M,
   Macintosh, and Xerox systems in C language.

May 1983 – July 1984
Programmer/Consultant, HAYDEN SOFTWARE, Lowell, MA.
   Created educational game software. Worked with graphics, sound, and systems level programming in
   6502 assembly and basic on Apple, Atari, and Commodore computers.

## COMMUNITY SERVICE
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|---|---|
| 2020-present | Member, School Board of Northern Utah Academy for Math, Engineering, Science (NUAMES) |
| 2018-2020 | Member, School Board of DaVinci Academy K-12 |
| 2011 | Principal, Computer Science web page review. |
| 2011 | Moderator, Utah Council for Undergraduate Research, Feb 18, 2011. |
| 2011 | CS2450 service learning experience, Quality Control and UI design for Ghana Project. |
| 2011 | CS2450 service learning experience, Quality Control for ChiTester smart phone project. |
| 2011 | CS2450 service learning experience, Design for WildEssentials.org project. |
| 2011 | CS2450 service learning experience, Design for ChiTester FAX project. |
| 2011 | Contributor, Digital History Archive artifacts for Union Building 50th anniversary. |
| 2010-2012 | Initiated a Science, Technology, and Story camp for grammar school level students. |
| 2010 | CS2350 service learning experience, Web Development for Community Involvement Center. |
| 2010 | CS2350 service learning experience, committee selection prototype for Faculty Senate. |
| 2010 | CS2350 service learning experience, Faculty Senate voting prototype. |
| 2006-2012 | Annual grammar school visit to Computer Science. |
| 2005-2006 | Annual Children's School visit to Computer Science. |
| 2008-2010 | Participant, Real Men Can Cook. Your Community Connection (YCC) charity event. |
| 2005 | Consultant for Ogden Treehouse Museum Web Site. |
| 2003, 2004 | Service Learning class project, Implementation of Utah Campus Compact Web Site. |
| 2002-present | Director, Implementation of WSU Digital History Archive. |
| 2000-present | Utah Junior and Senior High School Science Fair Judge. |

## PROFESSIONAL ORGANIZATIONS
.            Association for Computing Machinery (ACM) & the Special Interest Group on Computer
            Human Interfaces (SIGCHI) and Special Interest Group on Computer Science Educators
            (SIGCSE)

**OTHER - COLLEGE FOCUS:**

**COLLEGE FUNDRAISING THROUGH DEVELOPMENT**

| | |
|---|---|
| 2011 | $378,740 |
| 2012 | $409,809 |
| 2013 | $6,847,935 |
| 2014 | $665,534 |
| 2015 | $928,434 |
| 2016 | $15,964,708 |
| 2017 | $1,711,891 |
| 2018 | $3,273,100 |
| 2019 | $811,019 |
| 2020 | $6,750,400 |
| 2021 | $4,721,221 |
| 2022 | $1,090,474 |
| 2023 | $464,217 |
| Total | $45,152,686 |

**COLLEGE GRANTS AND APPROPRIATIONS - Utah Strategic Workforce Initiative (Investment)**

2021    Strategic Workforce Initiative (Investment) - CS Flex, $324,000 annual and $92,000 one-time (with Ogden, Morgan, Weber, Davis, NUAMES School Districts).

2020    Strategic Workforce Initiative (Investment) - Automotive Electrical and Hybrid Part II, $299,000 annual (~30% to OTC, DTC, SLCC).

2019    Strategic Workforce Initiative (Investment) - Automotive Electrical and Hybrid, High Schools, $275,000 annual (~30% to Granite, Weber, Davis School Districts).

2019    Strategic Workforce Initiative (Investment) - Building Design & Construction, $243,500 annual (~65% to OWTC, DTC, and Ogden, Morgan, Weber, Davis School Districts).

2019    Strategic Workforce Initiative (Investment) - Cybersecurity, $276,400 annual (~20% to OWTC, DTC, and Ogden, Morgan, Weber, Davis, NUAMES School Districts).

2018    Strategic Workforce Initiative (Investment) - Automotive, $290,000 annual ($100K to OWTC, DTC, BATC, SLCC).

2018    Strategic Workforce Initiative (Investment) - Web, $289,000 annual ($120K to DTC, $34K to Davis School District).

2017    Strategic Workforce Initiative (Investment) - Computer Science, $285,000 annual (with Ogden, Morgan, Weber, Davis School Districts).

2017    Strategic Workforce Initiative (Investment) - Controls, $285,000 annual ($90K to OTC, DTC, BATC).

Total: $2,566,900 annual and $92,000 one-time

**COLLEGE GRANTS AND APPROPRIATIONS - Assorted Other**

2024    Department of Defense (DOD) Advanced Materials Appropriation - Nuclear Weapon Center Manufacture of Aeroshells, $3,000,000.

2023    Department of Energy (DOE) Building Training and Assessment Centers (BTAC), $550,000.

2023    Utah Deep Tech Initiative  - Materials Science & Engineering, $810,000 /3-year.

2023    Utah Computer Science Targeted Workforce Initiative Grant - Strengthening Cyber security Pathways, $355,000 annual.

2023     Utah Talent Ready Connections - Cybersecurity and IT infrastructure Apprenticeship Program (extending DOL below), $160,000.

2023     Utah Computer Science Targeted Workforce Initiative Grant - Expansion of UX program, $170,000 annual.

2023     Utah USHE Innovation Grant - STEM and Cybersecurity Pathway and CyberRange Program, $410,000

2022     National Security Agency (NSA) Cybersecurity Grant Assistance, $125,000.

2022     Utah Learn & Work - Computing, Network Security, UX, and FM, $341,000.

2022     National Security Agency (NSA) Cybersecurity Grant Assistance - Develop cybersecurity competency in K-12, $125,000.

2022     Utah Computing Innovation Pathway USHE Innovation Grant - Strengthening Computing Pathways, $447,000 /3-year.

2021     Utah Deep Technology Talent Initiative - Autonomous Vehicle Systems Graduate Level Certificate, $870,000 /3-year.

2021     Utah Emerging Technology Initiative - Machine Learning/Data Science, $1.1M /3-year.

2019     U.S. Department of Labor (DOL) - Utah Tech Apprenticeship Program (UTAP), $2M.


**SELECTED COLLEGE SUCCESSES SINCE 2011**

**Centers**

. Created Alan E. Hall Center for Sales Excellence – 3M gift

. Utilized Hall Center to hire PhDs for Sales, raise more funding, and increase academics in Sales

. Created Wadman Center in Construction Management – 2M gift

. Acquired UCAID consulting, brought to college, and rebranded as Concept Center

**Outreach**

. Instituted WSU PREP, 7-week summer program for middle school kids

. Instituted diversity outreach: Parent-Daughter Engineering, Girls Go Digital, Girls Welding

. Brought FIRST Tech Challenge – lower cost, team-oriented, 7-12 grade robot contest - to Utah

. Became state facilitator for FIRST Lego League, FIRST Lego League Jr., and FIRST Tech Challenge

. Coordinated with HAFB to run, on campus, Mission to Mars and SeaPerch outreach programs

**International**

. Joined EAST to international Grand Challenges in Engineering program

. Created exchange relationships with Metropolia University, Helsinki, Finland, Seoul University, Seoul, S. Korea, Chang Mai University, Chang Mai, Thailand, Pamukkele University, Pamukkele, Turkey

**Hiring/Diversity**

. Hired 11 women into Engineering and Computer Science

. Hired 11 people of color into Engineering and Computer Science

. Hired four advisors to increase student retention and throughput

. Created Associate Dean position, elevated Allyson Saunders to Associate Dean

. Elevated Brian Rague to second Associate Dean

. Began conversation about diversity in college: created diversity committee, brought anthropologist from Harvey Mudd, began initiatives

**Development**

. Created college-level Dean's Advisory Board

**Community/Interdisciplinary**

. Raised funding and created Peterson Speaker Series

. Created annual LingoFest conference for Humanities, Social Science, and voice technology

. Wrote monthly column for Standard Examiner

. Created ETC2001 – Engineering Culture, Social Science General Education class

**Curriculum/Students**

. Removed General Education category from NTM1700
. Created Center for Computer Literacy and micro-modules for core computer literacy (in place of NTM1700)
. Increased online instruction in Computer Science (AAS) and Sales (AAS and BS)
. Created Product Design and Development program from Design Engineering Technology
. Created Web and User Experience program
. Created Mechanical Engineering program
. Created Manufacturing Systems Engineering Program
. Created MS in Computer Engineering (joint degree between EE and CS)
. Created MS in Electrical and Computer Engineering
. Created MS in Computer Science
. Collaborated with Math Department to create applied calculus courses
. Tripled the number of AAS (Associates of Applied Science) degrees by hardwiring the degree on the way to the BS degree in Engineering, Engineering Technology, and Computer Science. This boosted graduation numbers for our state funding metric.
. Attained 67% increase in student majors in college overall, 300% in EE, 147% in CS

**Accreditation**

. Accredited through ABET the Electrical Engineering program
. Accredited through ABET the Computer Science program
. Began accreditation through ABET for Network Systems and Construction Management Technology

**Organization**

. Created new department - Construction and Building Sciences – combining Interior Design, Construction Management, Facilities Management, Building Science
. Created new department – School of Computing – combining Computer Science, Network Technology, Web and User Experience
. Eliminated manufacturer-specific programs in Automotive and replaced with single comprehensive program
. Taught out last few Business Education majors
. Wrote strategic plans for college and all departments
. Overhauled college website and marketing plans

**Student Projects**

. Oversaw the creation of over 100 student capstone projects
. Created numerous domestic projects. Examples at Hill AFB and Catholic Community Services
. Created numerous international projects. Examples in Ghana, Thailand, Fiji

**Monetary**

. Raised lab fees to cover costs – but not enough to lose enrollments
. Raised over 1.8M in ongoing Engineering Initiative funding from state (requires university match)
. Raised over 1M in ongoing Strategic Workforce Initiative funding from state
. Attained more than 3M in funding from Perkins
. Increased number of internal and external grants coming into college
. Increased ongoing budget by ~100%

**Buildings**

. Raised private and public funding and completed three building projects: a new Computer and Automotive Engineering Building on the Davis campus, a new Noorda Building on Ogden campus replacing 1957 Technical Education Building, and refurbishment of the Engineering Technology Building on Ogden campus.