

STEPHEN C. HAYNE

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EDUCATION

Ph.D. University of Arizona (1990), Tucson, AZ, USA
Major: Management Information Systems (Dr. Sudha Ram – Advisor)
Minor: Economics

B.Commerce University of Alberta (1986, Honors), Edmonton, Canada
Concentrations: Finance, Management Science, Computer Science

A.A. Music Grant MacEwan Community College (1983), Edmonton, Canada
Majors: Bass Guitar, Voice

ACADEMIC AND PROFESSIONAL EXPERIENCE

Jan 2022 – Dec 2021 **Professor Emeritus (CSU), Retired**

May 2006 – Dec 2021 **Professor, Colorado State University**

Deputy-Director of the Colorado CyberSecurity Center. Nominated as a “**Best Teacher**” by CSU Alumni Association (2015, 2013 and 2011). Received research grants totaling more than **\$8.1M**. Received College of Business “Research Excellence” Award (2006).

Teaching: Database, CyberSecurity, Data Visualization. Current [Google Scholar](#):

All Since 2016

<u>Citations</u>	2133	365
<u>h-index</u>	24	13
<u>i10-index</u>	37	13

July 2000 – Apr 2006 **Associate Professor, Colorado State University**

Created Collaboration and Cognition Research Lab (2005). Awarded First National Bank Research Fellowship (2004-2007). Senior Summer Faculty Fellow at SPAWAR (2000).

July 1999 – June 2000 **Associate Professor, Arizona State University – West**

Developed wwwMBA. Implemented Undergraduate Concentration in Information Systems.

Jan 1995 – June 1999 **Assistant Professor, Arizona State University – West**

Developed and taught Graduate courses in *Business Process Innovation, Database Design and Implementation, Decision Support Systems, Expert Systems, Group Support Systems, and Strategic Use of Telecommunications*.

June 1996 - 2010 **Adjunct Professor**, American Graduate School of Intl. Mgmt.,
Vienna University of Economics and Business

Lectured and used the case method in Executive Education and Overseas Programs (Bucharest, Phoenix, Dubai, Archamps, and Prague). Specialties are *Decision Theory, Electronic Commerce, Technologies for Strategic Advantage, The Networked Firm, Knowledge Management, Outsourcing* and *Virtual Value Chain*.

July 1990 - Dec 1994 **Assistant Professor**, University of Calgary

Developed and taught Undergraduate courses in *Data Communications* and *Group Support Systems* as well as Undergraduate and Graduate courses in *Software Engineering* and *Database Management*. Managed installation and use of the Norcen Group Support Systems (GSS) Laboratory. Received several research grants (**\$126,360**). Nominated for **Teaching Excellence** awards (1992/93).

Sept 1987 - June 1990 **Research/Teaching Associate**, University of Arizona

Prepared the grant, designed, implemented and validated the Information Center Expert Help system (ICE/H) for IBM. Conducted on-site knowledge acquisition using GSS tools and developed a case study on technology innovation and adoption. Taught undergraduate *Introduction to COBOL, Data Structures, Data Communications* and *Computer Architectures*.

PRIMARY RESEARCH INTERESTS

Collaborative Technologies, Social Networks, Data Analytics, Decision Making, Distributed Data, Data Visualization

FUNDED RESEARCH GRANTS and GIFTS

CableLabs (**\$28,500**, 2021): *Outlier Detection in NetFlow Data*.

DHS (**\$740,000** – 2019, co-PI with PI: Partidge): *NetBrane Technology DDoS Mitigation Operational Evaluation CLIN 0040 – Pilot Testing*.

CSU-CIS (**\$22,000**, 2018): *Modelling Non-Stationary Multivariate Time Series of Counts*.

CSU-CIS (**\$43,000**, 2017): *Hypergraph Modeling of Team Formation*.

Microsoft Azure (**\$20,000** in cloud computing credit, 2017): *Detecting and Mitigating Distributed Denial of Service: Finding Outliers in Flow Data*.

DHS (D15PC00205, **\$2,700,000** – 2015, co-PI with PI: Papadopolous and Co-PI: Wang):
NetBrane: a software defined DDoS protection platform for Internet services.

CSU-CIS (**\$42,000**, 2016): *Evaluating the Impact of Online Product Reviews*.

CSU-CIS (**\$38,000**, 2015): *Building Teams: Integrating Academic Research Networks*.

CSU-CIS (**\$30,000**, 2014): *Organizational Impact of Academic Research Networks*.

CSU-CIS (**\$25,000**, 2013): *Evaluating the Risk of Purchase Decisions on eBay*.

CSU-CIS (**\$15,000**, 2012): *Commander's Intent and Distributed Collaborating Teams*.

ONR (**\$912,000** – 2007-10 with 21st Century Systems):

Phase 2 STTR - *C-RAM: Cognitively-Based Rapid Assessment Methodology*.

ONR (**\$100,000** – 2006 with 21st Century Systems):

Phase 1 STTR - *C-RAM: Cognitively-Based Rapid Assessment Methodology*.

IBM (**\$60,000** – 2006 with Cap Smith): *Women in STEM: The Impact of Storytelling Templates*.

IBM (**\$10,000** – 2005): *Women in the Math and Science: The Impact of Storytelling Templates*.

ONR (**\$650,000** – 2004-07 with Cap Smith and Pacific Sciences & Engineering):
 Phase 1 and 2 STTR - *A Human-Centric Architecture for Net-Centric Operations*.
 ONR (**\$452,000** – 2004-07): Follow on to *Shared Information and Virtual Surfaces*.
 IBM (**\$10,000** – 2002): *Honeynets and Ethical Hacking*.
 DARPA (CAP Smith – PI 2002): *Augmented Cognition: Multi-Model Support*, 1/9th salary.
 ONR (**\$312,000** – 2002): Follow on to *Shared Information and Virtual Surfaces*.
 ONR (**\$119,000** – 2001): Option year for *Shared Information and Virtual Surfaces*.
 ONR (**\$58,000** – 2000): *Shared Information and Virtual Surfaces*.
 NSF (**\$5,000** – 2000, Research Experiences for Undergraduates): *Web Auctions*
 NSF (**\$266,500** – 1999 with Jim Cox): *Group Decision-Making in Strategic Market Games*.
 ASU and Thunderbird (**\$10,000** – 1998): *Group Decision-Making Across Cultures*.
 NSF (**\$15,000** – 1997, ASU match \$16,000): *Group Decision-Making and the Winner's Curse*.
 ASU (**\$10,000** – 1998 with Jane Carey): *Asynchronous Learning*.
 ASU (**\$5,000** – 1997): *Distributed Teaching with FirstClass*.
 ASU (**\$5,500** – 1996): *Bidding in Groups*.
 ASU (**\$1,800** – 1995): *Teaching with the World Wide Web*.
 NSERC, Canada (**\$48,000** – 1991): *Concurrent Software Engineering*.
 Westronic Ltd., Canada (**\$45,000** – 1992): *Group Support System Adoption*.
 Faculty of Management, Canada (**\$7,500** – 1992): *Winner's Curse*.
 AEC, Canada (**\$10,000** – 1991): *Group Support Systems for Crisis Management*.
 Faculty of Management Research Grant, Canada (**\$10,000** – 1990).
 University of Calgary, Canada (**\$4,860** – 1990) to continue dissertation research.

PROPOSED RESEARCH GRANTS as PI (or Co-PI)

DOE-BIRD (**\$6M** – 2020 Co-PI, with PI: Craig Partridge): *Next-Generation Operational Energy Network - SCADA++*. **Finalist**.

DOD (**\$6.5M** – 2017 with Deana Devalos, Jeni Cross, Haonan Wang and Alan Rudolph):
Towards an Integrative Theory of Mind, Body and Social Connections: an Experimental Approach Using Immersive Experiences to Uncover Complex Systems in Trauma.
Encouraged to submit based on pre-proposal evaluation. COI

NSF (**\$100k** – 2017): **SCC-Planning - Bridging the Divide between People and Information Systems: Integrating Citizen Science, Big Data, and Local Analytics for Urban Sustainability & Health**. Co-PI

NSF (**\$1.1M** – 2014): *Foreign Constituent Impact on Snow Surface Roughness and Albedo - Implications for Modeling*. Co-PI

NSF (**\$1.2M** – 2014): *CyberSEES: Type 2: Customer-incentives based Resource Allocation in the Emerging Smart Grid*. Co-PI

NSF (**\$998,581** – 2013): *Foreign Constituent Impact on Snow Surface Roughness and Albedo - Implications for Modeling*. Co-PI

DARPA (**\$721,305** – 2011): *BAA 11-64 Social Network Formation, Detection and Composition*.

ONR (**\$100,000** – 2010): *N10A-T045 Development of Navy Wave Rich Collaboration for C2*.

Army Research Institute (**\$355,782** – 2008 with Lucy Troup): *Improving Performance of Virtual Teams: Effectiveness of Cognitive Templates on Leadership*. **Encouraged to submit based on pre-proposal evaluation**.

Army Research Institute (**\$183,658** – 2007): *Improving Virtual Team Performance with Cognitive Templates*.

NSF (\$499,812 – 2007): *Templates And Stories: Improving Participation Of Women In Stem. Encouraged to submit based on pre-proposal evaluation.*

NSF (\$603,959 – 2006): *Using Templates to Improve Retention of Women in Science. Encouraged.*

Army Research Institute (\$489,419 – 2006): *Using Templates to Improve Performance in Mixed-Presence Virtual Teams.*

ONR (\$4,450,000 – 2006-2011 with MIT and Harvard): *Cognitive-Focused Agent Support for Collaborative, Network-Centric Decision-Making.*

DARPA (\$100,000 – 2005): *DURIP Equipment Grant for Cognition and Collaboration.*

NSF (\$569,000 – 2005 with Cap Smith/Ben Clegg): *Cognitive Systems For Human Pattern Recognition and Collaboration.*

NSF (\$475,000 – 2004): *Cognitive Systems For Human Pattern Recognition.*

NSF (\$4.6M – 2003): *Virtual Command Center for Responses to Rapid Climate Change.*

DARPA (\$2.4M – proposed 2003): *Cognitive Systems for Team Pattern Recognition.*

REFEREED JOURNAL PUBLICATIONS

1. Huangfu, L., Hayne, S., Ma, J., Roberts, N. (2018). “Factor Analysis of Out-of-Hospital Days Based on Cancer Patients in China”, **Pacific Asia Journal of the Association for Information Systems**, 10(4).
2. Butler, C. W., Hayne, S. C. (2016). “The Role of EA in the IoT”, **Cutter Consortium Business & Enterprise Architecture Executive Update**, 19(8).
www.cutter.com/article/role-ea-iot-492461
3. Hayne, S., Wang, H. and Wang, L. (2015) “Modeling Reputation as a Time-Series: Evaluating the Risk of Purchase Decisions on eBay”, **Decision Sciences**, 46(6):1077-1107.
4. Hayne, S., Wang, H. and Mendonca, S. (2012) “eBay as the “Terminator”: Feedback Ratings and Culture”, **J. of Organizational Computing & Electronic Commerce**, 22(2):160-183.
5. Hayne, S., Troup, L. and McComb, S. (2011), ““Where’s Farah?”: Knowledge Silos and Information Fusion by Distributed Collaborating Teams”, **Information Systems Frontiers**, 13(1):89-100.
6. Hayne, S., Bugbee, B. and Wang, H. (2010), “Bidding Behaviors in eBay Auctions: Collectibles and Commodities,” **Electronic Markets**, 20(2):95-110.
7. Hayne, S. and Smith, C. (2010), “Effects of Training on Collaboration: Chunk Sharing and Performance”, **International Journal of Business and Systems Research**, 4(3):348-364.
8. Kock, N., Hantula, D., Hayne, S., Sadd, G., Todd, P. and Watson, R. (2008), “Introduction to the Special Issue on Darwinian Perspectives on Electronic Communication,” **IEEE Transactions on Professional Communication**, 51(2):1-15.
9. Hayne, S. and Cox, J. (2006), “Barking Up the Right Tree: Are Small Groups Rational Agents?,” **Experimental Economics**, 9:209–222.
10. Hayne, S., Smith, C.A.P. and Vijayasathy, L. (2005), “The Use of Pattern-Communication Tools and Team Pattern Recognition,” **IEEE Transactions on Professional Communication**, 48(4):377-390.

11. Hayne, S. and Smith, C.A.P (2005), "The Relationship Between e-Collaboration and Cognition," **International Journal of e-Collaboration**, 1(3):17-34.
12. Hayne, S. and Cox, J.C. (2004), "When Does an Incentive for Free Riding Promote Rational Bidding?," **Experimental Business Research**, Volume II, Zwick, Rami and Rapoport (Editors), Kluwer, Nowell, MA, 133-149.
13. Adams, J., Rogers, B., Hayne, S., Mark, G., Nash, J. and Leifer, L. (2004), "The effect of a telepointer on student performance and preference," **Computers and Education**, 44(1):35-51.
14. Hayne, S., Smith, C.A.P. and Turk, D. (2003), "The Effectiveness of Groups Recognizing Patterns," **International Journal of Human Computer Studies**, 59(5):523-543.
15. Hayne, S., Smith, C.A.P., and Vijaysarathy, L. (2003), "Who wins on eBay: An Analysis of Bidders and Their Bid Behaviours," **Journal of Electronic Markets**, 13(4):282-293.
16. Hayne, S., Pollard, C. and Rice, R. (2003), "Identification of Comment Authorship Anonymous Group Support Systems," **Journal of Management Information Systems**, 20(1):301-326.
17. Hayne, S. and Pollard, C. (2000), "A Comparative Analysis of Critical Issues Facing Canadian Information Systems Personnel: A National and Global Perspective," **Journal of Information and Management**, December, 38(2):73-86.
18. Arnold, V., Hayne, S., Smith, C.A.P., and Sutton, S. (2000), "An Investigation Of The Effect Of Computerized Support Systems On Group Decision Making Under Time Pressure," **Journal of Accounting Abstracts**.
19. Arnold, V., Hayne, S., Smith, C.A.P. and Sutton, S. (2000), "Group Decision Making: The Impact of Opportunity-Cost Time Pressure and Group Support Systems," **Behavioral Research in Accounting**, 12:69-96.
20. Hayne, S. (1999), "The Facilitators Perspective on Meetings and Implications for Group Support Systems Design," **Database**, 30(4):72-91.
21. Pendergast, M. and Hayne, S. (1999), "Groupware and Social Networks: Will Life Ever Be The Same Again?," **Journal of Information and Software Technology**, 41(6):311-318.
22. Smith, C.A.P., Hayne, S., Arnold, V., and Sutton, S. (1998), "An Investigation of Computer Support Systems on Managerial Group Decision Making Under Time Pressure," **Advances in Management Accounting**, 6:17-38.
23. Sutton, S., Smith, C.A.P., Arnold, V., and Hayne, S. (1998), "Audit Group Decision-Making: The Impact of Time Pressure and Group Support Systems," **AUDIT: The Audit Automation Magazine**, 12:18-22.
24. Pollard, C. and Hayne, S. (1998), "The Changing Face of Information Systems Issues Facing Small Firms," **International Small Business Journal**, 16(3):70-88.
25. Hayne, S. and Sutton, S. (1998), "Judgment and Decision Making, Part III: Group Processes," in **Behavioral Accounting Research: Foundations and Frontiers**, ed. S.G. Sutton and V. Arnold, American Accounting Association, pp. 134-163.

26. Hayne, S. and Rice, R. (1997), "Attribution Accuracy When Using Anonymity In Group Support Systems," **International Journal of Human Computer Studies**, 47(3):429-450.
27. Smith, C.A.P. and Hayne, S. (1997), "Decision Making Under Time Pressure: An Investigation of Decision Speed and Decision Quality of Computer-Supported Groups," **Management Communication Quarterly**, 11(1):97-126.
28. Hayne, S. and Sutton, S. (1996), "Toward Effective Group Decision Making: Integrating Group Support Systems into the Accounting Environment," **Advances in Accounting Information Systems**, 4:279-304.
29. Hayne, S. (1995), "Object Oriented Databases: How do we get there from here?," **Journal of Systems Management**, November, 46(6):38-46.
30. Hayne, S. and Pendergast, M. (1995), "Experiences with Object Oriented Group Support Software Development," **IBM Systems Journal**, 34(1):96-120.
31. Hayne, S. and Ram, S. (1995), "Group Database Design: Addressing the View Modeling Problem," **Journal of Systems and Software**, February, 28(2):97-122.
32. Hayne, S., Pendergast, M. and Greenberg, S. (1994), "Implementing Gesturing with Cursors in Group Support Systems," **Journal of Management Information Systems**, December, 10(3):43-61.
33. Pendergast, M. and Hayne, S. (1994), "Alleviating Convergence Problems in Group Support Systems: The Shared Context Approach," **Journal of Computer Supported Cooperative Work**, 3(1):1-28.
34. Chin, W., Hayne, S. and Licker, P. (1992), "The Group Consolidation Problem During GSS Usage: A New Approach And Initial Empirical Evidence," **Journal of Information and Technology Management**, November, 3(2):15-28.
35. Ram, S., Hayne, S. and Carlson, D. (1992), "Integrating Information Systems Technologies to Support Consultation in an Information Center," **Journal of Information and Management**, December, 23(6):331-360.

REFEREED PROCEEDINGS

1. McAndrew, R., Hayne, S., Wang, H., "An Unsupervised Approach to DDoS Attack Detection and Mitigation in Near-Real Time", **HICSS, 2020**.
2. Hayne, S. (2019), "NetBrane: Detecting and Protecting from DDoS Attacks", **Proceedings of the 20th Monterey Workshop on Cyber Security**.
3. McAndrew, R., Hayne, S., Wang, H. (2019), "The Benefits of a Functional Approach to Detecting and Mitigating a DDoS Attack", **International Conference on Internet Monitoring and Protection 2019, Awarded Conference BEST paper**.
4. McAndrew, R., Hayne, S., Wang, H. (2019), "Comparison of Supervised and Unsupervised Learning for Detecting Anomalies in Network Traffic", **HICSS 2019**.
5. Huangfu, L., Hayne, S., Ma, J., Roberts, N. (2018). "Exploratory Study for Readmission in Cancer Patients", **Americas Conference on Information Systems, New Orleans**.
6. McAndrew, R., Gharaibeh, M., Wang, H., Hayne, S., Papadopoulos, C. (2017) "A Functional Approach to Scanner Detection", **ACM Asian Internet Engineering Conference**.

7. Hayne, S., Troup, L. and Li, K. (2013), "Commander's Intent and Distributed Collaborating Teams," **Hawaii International Conference on System Sciences**.
8. Hayne, S., Pendergast, M. and Smith, C.A.P. (2012), "Team Composition, Knowledge and Collaboration", **Southern Association for Information Systems**.
9. Hayne, S. and Folkestad, J. (2011), "Visualization and Analysis of Social Networks of Research Funding," **Hawaii International Conference on System Sciences**.
10. Hayne, S. (2009), "Using Storytelling to Enhance Information Systems Knowledge Transfer", **8th Annual ISOneWorld Conference**, Las Vegas, April.
11. Hayne, S., Smith, C. and Vijayasarathy, L. (2005), "Training for Collaboration and Cognitive Alignment," **Americas Conference Information Systems. Conference Best Paper**.
12. Hayne, S., Smith, C.A.P. and Vijayasarathy, L. (2005), "Pattern Recognition: Sharing Cognitive Chunks Under Time Pressure," **Hawaii International Conference on System Sciences**, pp. 30b-40b.
13. Hayne, S., Smith, C.A.P. and Vijayasarathy, L. (2004), "The Use of Pattern-Sharing Tools and Team Pattern Recognition," **DSS Conference**, Prato, Italy.
14. Hayne, S. and Cox, J. (2003), "When Does an Incentive for Free Riding Promote Rational Bidding?," **Second Asian Conference on Experimental Business Research**, Hong Kong.
15. Cox, J. and Hayne, S. (2002), "Barking Up the Right Tree: Are Small Groups Rational Agents?," the **Behavioral Economics Conference**, Great Barrington, MA, July 19-21.
16. Pollard, C. and Hayne, S. (2002), "Trends in Time Spent in Meetings and Extent of GSS Use in Organizations: Report on a Longitudinal Empirical Study," **Group Decision and Negotiation Conference**, Perth, Western Australia.
17. Rice, R.E., Hayne, S. and Pollard, C. (1999), "Content factors influencing accuracy of authorship attributions for anonymous, mediated brainstorming comments." In S. Havlovic (Ed.) **Academy of Management Best Papers Proceedings**. (CD-ROM: OCIS: c1-c6.)
18. Arnold, V., Hayne, S., Sutton, S. and Smith, C.A.P. (1997), "Auditing Under Time Pressure: The Materiality Judgment," **Americas Information Systems Conference**, 750-753.
19. Arnold, V., Hayne, S., Smith, C.A.P., and Sutton, S. (1996), "An Investigation Of The Effect Of Computerized Support Systems On Group Decision Making Under Time Pressure," **Accounting Association of Australia and New Zealand**, published on the World Wide Web (presented by Sutton).
20. Smith, C.A.P. and Hayne, S. (1996), "Decision Making Under Time Pressure: An Investigation of Decision Speed and Decision Quality of Computer Supported Groups," **Americas Information Systems Conference**, 136-139.
21. Pollard, C. and Hayne, S. (1996), "The Reality of Meetings and the Use of Automated Meeting Tools," **Americas Information Systems Conference**, 250-253.
22. Hayne, S. and Smith, C.A.P. (1996), "Experiences with Electronic and Voice Mail," **Hawaii International Conference on System Sciences**, 3:102-112.
23. Pollard, C. and Hayne, S. (1996), "A Comparative Analysis of Information Systems Issues Facing Canadian Business," **HICSS**, 2:68-78.
24. Pollard, C. and Hayne, S. (1995), "Information Systems Issues Facing Canadian Small Business," **Association of Management Conference**, 198-204.
25. Hayne, S. (1994), "Teaching Using Group Support Systems as a Feedback Mechanism," **Association of Management Conference**, 127-134.
26. Hayne, S. and Smith, C.A.P. (1994), "Choice and Judgment: The Future of Flight Training," **AIAA Flight Simulation Technologies Conference**, 1024-1030.

27. Hayne, S. and Pendergast, M. (1994), "Techniques and Experiences with Object Oriented Windows-based Group Support Software Development," **IBM CASCON Conference**, CD-ROM.
28. Hayne, S., Rice, R. and Licker, P. (1994), "Social Cues and Anonymous Group Interaction Using Group Support Systems," **HICSS**, 4:79-88.
29. Ma, X., Hayne, S., (1993), "Objects: Where Are You?," **Administrative Sciences Association of Canada Conference**, Lake Louise, 84-90.
30. Hayne, S., Pendergast, M., Greenberg, S. (1993), "Gesturing Through Cursors: Implementing Multiple Pointers in Group Support Systems," **HICSS**, 4:4-14. *Best Paper*.
31. Dubs, S. and Hayne, S. (1992), "Distributed Facilitation: A Concept Whose Time Has Come?," **Computer Supported Cooperative Work Conference**, 314-321.
32. Hayne, S., Pendergast, M., Greenberg, S. (1992), "Group Interaction with Multiple Pointers," **CSCW Workshop on Real Time Group Drawing and Writing Tools**, 45-60.
33. Chin, W., Hayne, S., Licker, P. (1992), "Alternative Methods of Consolidating Ideas in a Group Setting," **Association for Management Conference**, 43-53.
34. Hayne, S. (1992), "Knowledge Acquisition From Multiple Experts with Group Support Systems," **Intl. Conference on Knowledge Acquisition**, Banff, Canada, 31-40.
35. Smith, C.A.P., Hayne, S., (1992), "Decision-Making Under Time Pressure: An Investigation of the Performance of Computer Supported Groups," **Decision Support Systems**, 203-212.
36. Pendergast, M., Hayne, S., (1991), "Assisting Groups During the Information Merging Process," **Decision Sciences International Conference**, 720-725.
37. Smith, C.A.P., Hayne, S., (1991), "A Distributed System for Crisis Management," **Hawaii International Conference on System Sciences**, 72-82.
38. Hayne, S., Purdin, T. (1990), "A Distributed Tool for Issue Analysis," **Symposium on Applied Computing**, 325-329.
39. Hayne, S., Ram, S. (1990), "Multi-User View Integration System (MUVIS): An Expert System for View Integration," **International Conference on Data Engineering**, 402-409.
40. Hayne, S., Ram, S. (1989), "Architecture for a Multi-User View Integration System," **Working Paper Series on AI in Management Science**, 210-223.
41. Ram, S., Hayne, S., Carlson, D., Nunamaker, J. (1989), "Information Center Expert Help System (ICE/H): An Information Center Application," **International Conference on Information Systems**, 67-79.
42. Ram, S., Nunamaker, J., Liou, I., Carlson, D., Hayne, S. (1989), "Using Group Decision Support Systems for Knowledge Acquisition: An Information Center Application," **Decision Support Systems Conference**, 87-102.

BOOKS and CHAPTERS

Hayne, S. & Smith, C. (2008) Collaborative Team Pattern Recognition Templates and Team Decision Making, **Macro-cognition in Teams: Theories and Methodologies**, Editors: Letsky, Warner, Ashgate, U.K.

Smith, C.A.P. and Hayne, S. (2006), "Propositions for Cognitive Support of e-Collaboration," in **Advanced Topics in e-Collaboration**, editor: Ned Kock, Idea Group Press, New York.

GROUP'99: Proceedings of the International Conference on Supporting Group Work, (1999), Editor: Stephen Hayne, ACM Press, New York, 480 pp.

GROUP'97: Proceedings of the International Conference on Supporting Group Work, (1997), Editors: Stephen Hayne, Wolfgang Prinz, ACM Press, New York, 480 pp.

Real Time Group Drawing and Writing, (1995), editors: Saul Greenberg, Stephen Hayne, Roy Rada, McGraw-Hill, New York.

Gopal, A., Hayne, S., Chin, W., Pollard and C., Licker, P. (1992) "Group Support Systems Above the Snow Line," chapter for **Computer Augmented Teamwork: The Tour Guide**, editors: Susan Kinney, Bob Bostrom, Rick Watson, Von Reinhold Nostrom, New York.

REFEREED PRESENTATIONS

Hayne, S., Smith, C.A.P. and Vijayasathy, L. (2003), "Chunking and Team Pattern Recognition," **CORE Workshop (pre-ICIS)**, Seattle, WA, December.

Hayne, S., Smith, C.A.P. and Vijayasathy, L. (2002), "Predicting Sniping in eBay Auctions," **INFORMS Conference**, San Jose, CA, November.

Cox, J. and Hayne, S. (2002), "Barking Up the Right Tree: Are Small Groups Rational Agents?," **INFORMS Conference**, San Jose, CA, November.

Cox, J. and Hayne, S. (1998), "Group vs. Individual Decision-Making in Strategic Market Games," **Economic Science Association Annual Meeting**, <http://www.esa.uni-mannheim.de/> (presented by Cox).

Hayne, S., Pollard, C. and Rice, R. (1997), "Accuracy of Attribution in Small Groups Using Anonymity in Group Support Systems," **Academy of Management Conference**, (presented by Rice).

Arnold, V., Hayne, S., Smith, C.A.P., and Sutton, S. (1997), "An Examination of Audit Group Decision Making Under Time Pressure," **American Accounting Association National Meeting**, (presented by Arnold).

Arnold, V., Hayne, S., Smith, C.A.P., and Sutton, S. (1996), "Audit Group Decision Making: The Impact of Time Pressure and Group Support Systems," **Auditing Mid-Year Conference**, (presented by Sutton).

ARTICLES UNDER REVIEW

WORKING PAPERS

Lin, M., Wang, H., Hayne, S. C. "Bivariate Analysis of NTP Traffic".

Hayne, S., McAndrew, R., Wang, H., "NetBrane: The Benefits of a Functional Approach to Network Traffic Analysis - A Scanner Detection Example", **under revision**.

Hayne, S., Haunfelder, R., and Wang, H., "Time Dependent Modeling of Collaboration Networks and Partner Recommendation," **under revision**.

Haunfelder, R., Fosdick, B., Wang, H., and Hayne, S., "Hypergraph Modeling of the Evolution of Team Relationships with Applications to Academic Funding Collaborations".

Hayne, S., "Information Systems Knowledge Transfer through Stories".

Hayne, S. and Gill, E., "Utopia in Virtual Worlds".

INVITED PRESENTATIONS

A presentation entitled “NetBrane: Detecting and Protecting from DDoS Attacks” was given at the **Monterey Cyber Security Workshop**, Naval Postgraduate School, Monterey, CA, 2018.

A presentation entitled “NTP DDoS Detection and Mitigation” was given to **Department of Homeland Security**, in Washington, DC, 2018 and a presentation entitled “Visualization of NTP DDoS” was given to **DHS**, in Houston, 2017.

Track Chair (and presentations) at the **Office of Naval Research** Workshop on Technology for Command and Control Collaboration, 2001-2007.

A presentation entitled “Sniping in eBay Auctions: Cultural Implications” was given at **University of Arizona**, 2002.

A presentation entitled “E-Biz: Savior or Anarchist” was given to 1500 people at the Success 2000 Conference, Phoenix, AZ, 2000.

A presentation entitled “Groups and the Curse of Information” was given to **Microsoft Research** and **University of British Columbia**, 1999.

Internal Service

Co-Director, Colorado Center for Cyber Security (CSU), 2018-2021.

Faculty Council Executive Committee Representative (COB), 2017-2019.

Faculty Council Representative (CIS), 2009-present.

ISTEC Research Advisory Committee, 2003-present.

COB Research Lab Committee, 2011-2014.

Chair COB Research Committee, 2005-2007 (Member from 2001-2008).

Member of the University Prestigious Scholarship Task Force, 2001-2003.

Member of the CIS Department Tenure and Promotion Committee (when formed).

Advising – Graduate Students

48+ M.S. Students and 21 Ph.D. students (Co-Advisor or Committee) in the last 20 years.

PROFESSIONAL MEMBERSHIP

Senior Member, Institute of Electrical and Electronics Engineers (IEEE)

Association for Computing Machinery (ACM)

PROFESSIONAL ACTIVITIES

Registration Chair and Treasurer for the *International Conference on Supporting Group Work (GROUP)*, Sanibel, Florida, 2003/05/07/09/10/12/14/16/18 and 2020 ~130 attendees.

Registration Chair and Treasurer for *Computer Supported Collaborative Work Conference 2010* (Georgia), 2011 (Haongzhao), and 2012 (Seattle). 350-650 attendees.

General Co-Chair (with John Hoxmeier) of the *Americas Conference on Information Systems*, Keystone, Colorado, 2007. 1100 attendees, 450 paper sessions.

Elected Chair of the ACM Special Interest Group on Supporting Group Work (SIGGROUP), 1999-2002. Previous positions of Secretary/Treasurer (International) and Information Director.

General Chair for the *International Conference on Supporting Group Work*, Phoenix, 1997 and 1999. Over 150 attendees each year, with more than 100 submitted papers (and 38 accepted).

Member of Editorial Review Board of the *Journal of Database Management* (1995-present) and *Journal of Management Systems* (1996-present).

Journal Reviewer: *Management Information Systems Quarterly*, *Decision Sciences*, *Journal of Management Information Systems*, *IEEE Computer*, *IBM Systems Journal*, *Transactions on Information Systems*, *International Journal of Man Machine Studies*, *Decision Support Systems Journal*, *Canadian Journal of Administrative Sciences*.

Conference Proceedings Reviewer: Americas Information System Conference (*AMCIS*): 1995-present. International Conference on Information Systems (*ICIS*): 1988-present. Hawaii International Conference on System Sciences (*HICSS*): 1989- present. Administrative Sciences Association of Canada (*ASAC*): 1991-95.

Program Committee Member for Entity Relationship Conference, Los Angeles, 1997. Publicity Chair for Data and Knowledge Systems in Manufacturing and Engineering Conference, Phoenix, 1996. Mini-Track Co-Chair of “Decision-Making Under Time Pressure,” at the Americas Information System Conference, 1996-98. Program Committee Member for International Conference on Information Systems, Vancouver, 1994.

HONORS/AWARDS

Best Paper Award at International Conference on Internet Monitoring and Protection (2019).

Nominated as a “**Best Teacher**” by CSU Alumni Association (2015, 2013, 2011).

First National Bank Research Fellow (2004-2007).

IBM Faculty Fellowship (2006).

College of Business Research Excellence Award (2006).

Best Paper Award at Americas Information System Conference (2005).

Best Paper Award at Academy of Management Conference (1999).

Best Paper Award at Hawaii International Conference on System Sciences (1993).

Nominated for Teaching Excellence Award, University of Calgary (1992 and 1993).

Doctoral Student Consortium, Decision Sciences Institute, New Orleans, (1989).

University of Arizona Graduate Tuition Scholarship (Sept. 1987 - May 1990).

Teaching Excellence Award, University of Arizona (1988).

CONSULTING

Expert Witness: Babbage Holdings, LLC v. Sony Computer Entertainment America, LLC and Sony Online Entertainment, LLC, Case No. 2:13-CV-757

I have designed and assisted in deployment of information systems for several domestic and international companies. In 2002, I was part of a team that applied for a Patent (US 2002/0156715 A1) for auctioning and re-issuing “tickets” online.

PERSONAL

Enjoy golf, basketball, rugby, tennis, jazz music. Instrument, Multi-Engine Pilot – volunteering for Civil Air Patrol and Angel Flight. Reasonably fluent in French.