

Vicki H. Allan

Computer Science Department, Utah State University, Logan, Utah 84322-4205
<https://engineering.usu.edu/cs/directory/faculty/allan-vicki>
Vicki.Allan@usu.edu Fax: 435-797-3265 Office: 435-797-2022

Education

Colorado State University, Ph.D. (Computer Science) 1986
A Critical Analysis of the Global Optimization Problem for Horizontal Microcode,
Advisor: Robert Mueller
Colorado State University, M.S. (Computer Science) 1984
[Education interrupted: instructor, 1974-1982]
Utah State University, M.M. (Mathematics) 1974
Utah State University, B.S. (Mathematics-Computer Science-Statistics) 1973, Summa Cum Laude
(Distinguished graduate, graduation program participant)

Areas of Emphasis

Multiagent Systems
Analysis of algorithms
Programming Languages
Educational Outreach

Experience

1992-Present Utah State University, Associate Professor, Computer Science Department
1986-1992 Utah State University, Assistant Professor, Computer Science Department
1985-1986 Colorado State University, Research Assistant, Computer Science Department
1984-1985 Denelcor, Inc., Research Assistant
1979-1982 Colorado State University, Instructor, Department of Computer Science
1974-1979 Iowa State University, Instructor, Department of Computer Science

Academic Honors

Utah State University, University, Faculty University Service of the Year 2022
Utah State University, College of Science, Faculty University Service of the Year 2022
Utah State University, Computer Science, Faculty Service Award, 2018
Utah State University, Computer Science, Teaching Excellence Award, 2014
Utah State University, Computer Science Faculty Service Award, 2013.
Utah State University, Computer Science Teacher of the Year, 2002.
Utah State University, University Advisor of the Year, 1994 (USU Robbins Awards).
Utah State University, Computer Science Advisor of the Year, 1994.
Utah State University College of Science Advisor of the Year, 1994.
Best Presentation 1987, Micro20
Phi Kappa Phi

Publications

Last updated June 2026

Vicki H Allan

Refereed Journal Articles

(I am the major professor for individuals marked with **. Individuals marked with # completed the work as an extension of coursework.)

1. Clarke-Midura, J., *Sun, C., *Pantic, K., *Poole, F., & **Allan, V.** (2019). Using Informed Design in Informal Computer Science Programs to Increase Youths' Interest, Self-efficacy, and Perceptions of Parental Support. *ACM Transactions on Computing Education (TOCE)*, 19 (4), 1-12 (Article 37), doi: 10.1145/3319445
2. Clarke-Midura, J., *Pantic, K., *Roller, J & **Allan, V.** (2018) Drawing a Computer Scientist: Stereotypical Representations or Lack of Awareness? *Computer Science Education*. 28,3 <https://doi.org/10.1080/08993408.2018.1533780>
3. Clarke-Midura, J., *Poole, F., *Pantic, K., *Sun, C., & **Allan, V.** (2018). How Mother and Father Support Affect Youths' Interest in Computer Science. In *Proceedings of the 2018 ACM Conference on International Computing Education Research (ICER 18)*. ACM, Espoo, Finland, 215-222. doi: [10.1145/3230977.3231003](https://doi.org/10.1145/3230977.3231003)
4. Clarke-Midura, J., *Poole, F., *Pantic, K., & **Allan, V.** Playing mentor: A new strategy for recruiting young women into computer science. *Journal of Women and Minorities in Science and Engineering*, 2017, 23(3). doi:10.1615/JWomenMinorScienEng.2017019307
5. ****R.O. Lasisi and V.H. Allan**, "FALSE-NAME MANIPULATION IN WEIGHTED VOTING GAMES: EMPIRICAL AND THEORETICAL ANALYSIS", *Computation Intelligence: An International Journal*, July 2016, Online ISSN: 1467-8640. DOI: 10.1111/coin.12096
6. ****K. Ahmadi and V.H. Allan**, Trust-Based Decision Making in Self-Adaptive Agent Organization, *ACM Transactions on Autonomous and Adaptive Systems (TAAS) - Special Section on Best Papers from SASO 2014 and Regular Articles: Volume 11 Issue 2, July 2016 (impact factor 0.92)*
7. A. Ghaffarizadeh and **V.H. Allan**, History Based Coalition Formation in Hedonic Context Using Trust, *International Journal of Artificial Intelligence & Applications (IJAI)*, July, 2013, Volume 4:4, ISSN : 0975-900X.
8. ****Ramon O. Lasisi and Vicki H. Allan**. Manipulation of Weighted Voting Games and the Effect of Quota. [Agents and Artificial Intelligence Communications in Computer and Information Science](https://doi.org/10.1007/978-3-642-29966-7_27) Volume 271, 2013, pp 413-428 http://link.springer.com/chapter/10.1007/978-3-642-29966-7_27
9. ****D. Stormont and V. H. Allan**, Managing Risk in Disaster Scenarios with Autonomous Robots, *the Journal of Systemics, Cybernetics and Informatics*, Vol 7:4, 2009.
10. **V. H. Allan** and ****X. Chen**, Convert2Java: Semi-Automatic Conversion of C to Java, *Future Generation Computer Systems, Java in High Performance Computing*, October 2001, Vol 18-2, pages 201-211.
11. **V.H. Allan**, S.J. Beaty, B. Su, and P.H. Sweany, Building a Retargetable Local Instruction Scheduler , *Software Practice and Experience* .28:3, March 1998, pages 249-285.
12. **V.H. Allan**, ****R. Jones**, ****R. Lee** and S.J. Allan, Software Pipelining, *ACM Computing Surveys*, 27-3, September 1995.
13. **V.H. Allan** and ****R.K. Sistla**, The Effect of Parallelism on Register Allocation , *IEEE Potentials*, December 1995.
14. ****M. Rajagopalan** and **V.H. Allan**, Specification of Software Pipelining using Petri Nets , *International Journal of Parallel Processing*, 3-22, 1994, pages 279-307.

15. **V. H. Allan**, Bogong Su, **P Wijaya, and **J. Wang, Instruction Scheduling under Timing Constraints , Transactions on Computers, 41-9, September 1992.
16. R.A. Mueller and **V.H. Allan** Compaction with General Synchronous Timing, IEEE Transactions on Software Engineering , May 1988.
17. R.A. Mueller, **V. H. Allan** and J.Varghese, The Complexity of Horizontal Word Encoding in Microprogrammed Machines, IEEE Transactions on Computers , C-33, 10, October 1984, 938-939.

Refereed Conferences/Symposium Articles
(Acceptance based on submission of full article.)

*(I am the major professor for individuals marked with **. Students outside the CS department are marked with *)*

1. **J. Li and V. H. Allan, "Learning from Failure: Towards Balance-Aware Robotaxi Fleet Deployment via Multiagent Reinforcement Learning", in Proceedings of the 18th International Conference on Agents and Artificial Intelligence ICAART, INSTICC, SciTePress, 2026 **(H5-index 20)**.
2. Nguyen, H and **V.H. Allan**. 2024. Using GPT-4 to Provide Tiered, Formative Code Feedback. **Proceedings of the 55th ACM Technical Symposium on Computer Science Education V. 1 (SIGCSE 2024). Association for Computing Machinery, New York, NY, USA**, 958–964. <https://doi.org/10.1145/3626252.3630960> (Conference rank A, H5-index 31)
3. Nguyen, H., **Stott, N. & Allan, V., Comparing Feedback from Large Language Models and Instructors: Teaching Computer Science at Scale. **ACM Conference on Learning @ Scale 2024. (research Ranking 212, H5-Index 10)**
4. **J. Li and V. H. Allan, 'Supply-Demand Balancing and Fairness Enhancement in Ride-Sharing Services: A Graph Reinforcement Learning Based Approach', **IEEE AIoT 2024**.
5. **J. Li and V. H. Allan, Agent Guidance in Autonomous Mobility on Demand Systems: An Approach Utilizing Priority Double Deep-Q-Networks, **IEEE CCWC Computing and Communication Workshop and Conference 2024, January 2024 at the University of Nevada, Las Vegas, USA (H5-index 38)**
6. **J. Li and V. H. Allan "Multiple Agents Dispatch via Batch Synchronous Actor Critic in Autonomous Mobility on Demand Systems", in Proceedings of the 16th International Conference on Agents and Artificial Intelligence ICAART, INSTICC, SciTePress, 2024 **(H5-index 20)**
7. **J. Li and V. H. Allan, "Where to go: Agent Guidance with Deep Reinforcement Learning in A City-Scale Online Ride-Hailing Service," *2022 IEEE 25th International Conference on Intelligent Transportation Systems (ITSC)*, 2022, pp. 1943-1948, doi: 10.1109/ITSC55140.2022.9921747. (H-index 80)
8. **K. Ahmadi, **V.H. Allan**, Practical City Scale Stochastic Path Planning with Pre-computation. In International Conference on Agents and Artificial Intelligence 2021 Feb 4 (pp. 315-339). Cham: Springer International Publishing. (H index 5)
9. **J. Li, V.H. Allan, "T-balance: A unified mechanism for taxi scheduling in a city-scale ride-sharing service," in Proceedings of the 14th International Conference on Agents and Artificial Intelligence Volume 2: ICAART,, pp. 458–465, INSTICC, SciTePress, 2022 (20% acceptance. H5 index 20)
10. **K. Ahmadi, **V.H. Allan**, Smart City: Application of Multi-agent Reinforcement Learning Systems in Adaptive Traffic Management, IEEE International Smart Cities Conference (ISC2), Sept 2021. (H5 impact 24)
11. **K. Ahmadi, **V.H. Allan**, Congestion-aware Stochastic Path Planning and its Application in Real World Navigation, Proceedings of ICAART 2021, DOI: [10.5220/0010267009470956](https://doi.org/10.5220/0010267009470956), ISBN: [978-989-758-484-8](https://www.isbn-international.org/product/978-989-758-484-8) (16% acceptance H5 impact 17)
12. **K. Ahmadi, **V.H. Allan**, Scalable Stochastic Path Planning under Congestion, Proceedings of ICAART 2021, DOI: [10.5220/0010394104540463](https://doi.org/10.5220/0010394104540463), ISBN: [978-989-758-484-8](https://www.isbn-international.org/product/978-989-758-484-8) (16% acceptance H5 impact 17)

13. **Li, JiYao and Allan, Vicki H. Balancing Taxi Distribution in City-Scale Dynamic Ridesharing Service: A Hybrid Solution Based on Demand Learning, 2020 IEEE International Smart Cities Conference (ISC2 2020). Sept 28 – Oct 1, 2020. (H5-index 12)
14. **Li, JiYao and Allan, Vicki H. A Ride-Matching Strategy For Large Scale Dynamic Ridesharing Services Based on Polar Coordinates, 2019 IEEE International Conference on Smart Computing (SMARTCOMP), (2019) DOI: [10.1109/SMARTCOMP.2019.00086](https://doi.org/10.1109/SMARTCOMP.2019.00086) (29% H-5 index 24)
15. **Neary, P and **V.H. Allan** (2019), Plug and Play Deep Convolutional Neural Networks, ICAART (11th International Conference on Agents and Artificial Intelligence, Poster). (50% H5 index 17))
16. Clarke-Midura, J., *Poole, F., *Pantic, K., *Hamilton, M., *Sun, C., & Allan, V. (2018). How Near Peer Mentoring Affects Middle School Mentees. In *Proceedings of the 49th ACM Technical Symposium on Computer Science Education (SIGCSE '18)*. ACM, New York, NY, USA, 664-669. DOI: <https://doi.org/10.1145/3159450.3159525> (34%)
17. **K. Ahmadi, **V. H. Allan**, “Stochastic Path Finding Under Congestion”, The 2017 International Conference on Computational Science and Computational Intelligence (CSCI'17) Las Vegas, NV, 2017, pp. 135-140. doi: 10.1109/CSCI.2017.22. (17%)
18. Kristin A Searle, Colby Tofel-Grehl, and **V.H Allan**, The E-Textiles Bracelet Hack: Bringing Making to Middle School Classrooms, 7th Annual Fablearn (Flagship) Conference, FABLEARN 2016: 6th Annual Conference on Creativity and Making in Education, October 14-16 2016 (short paper) (40%).
19. Jody Clarke-Midura, **V.H. Allan**, and *Kevin Close, Investigating the Role of Being a Mentor as a way of increasing interest in CS, The 47th ACM Technical Symposium on Computer Science Education (SIGCSE2016), March 2016 (34.5%)
20. **K. Ahmadi and **V.H. Allan**, Checking The Reliability of Information Sources in Recommendation Based Trust Decision Making, Principles and Practice of Multi-Agent Systems (PRIMA 2015), October 2015, Bertinoro, Italy, (31% full)
21. **Ramon Lasisi and **V.H.Allan**, New Bounds on False-Name Manipulation in Weighted Voting Games, Florida Artificial Intelligence Research Society (FLAIRS-27), Pensacola Beach, Florida, May 2014.
22. Chenguang Liu, Hengda Cheng, **V.H.Allan**, Articulated Human Pose Tracking Based on Game Theory, International Conference on Image Processing, ICIP, 2013.
23. **U. Weerakoon and **V.H. Allan**, Coalition Formation for Serving Dynamic Motion Tasks, CPAIOR, Yorktown Heights, New York, May,2013, (28% full, 15% short).
24. **K. Ahmadi and **V. H. Allan**, Efficient Self Adapting Agent Organizations, International Conference on Agents and Artificial Intelligence, International Conference on Agents and Artificial Intelligence ICAART 2013, Barcelona, Spain, Feb 2013. (14% full, 24% short)
25. **K Feuz and **V.H. Allan**, Group Formation and Knowledge Sharing in Pedestrian Egress Simulation, International Conference on Agents and Artificial Intelligence, International Conference on Agents and Artificial Intelligence (ICAART) 2013, Barcelona, Spain, Feb 2013. (14% full, 24% short, 12% poster)
26. **R. Lasisi, R and **V.H. Allan**, Experimental Evaluation of the Effects of Manipulation by Merging in Weighted Voting Games, International Conference on Agents and Artificial Intelligence, ICAART 2013, Barcelona, Spain, Feb 2013. (14% full, 24% short)
27. **R. Lasisi and **V.H .Allan**. On The Problem Of Annexations And Merging In Weighted Voting Games, ICAART, Faro, Portugal, February 2012. (14% acceptance)
28. **K. Feuz and **V.H. Allan**, Simulating Pedestrian Route Selection with Imperfect Knowledge, ICAART, Faro, Portugal, February 2012 (14% full, 24% short)

29. **K. Feuz and **V.H. Allan**, Simulating Knowledge and Information in Pedestrian Egress, ICAART, Faro, Portugal, February 2012 (14% full, 24% short)
30. **D.P. Stormont and **V.H. Allan**, A Comparison Of Diplomacy Gameboard Graph Search Algorithms, ICAART, Faro, Portugal, February 2012 (Poster) (14% full, 24% short, 12% poster)
31. **R. Lasisi and **V.H. Allan**. 'Annexations and Merging in Weighted Voting Games - The Extent of Susceptibility of Power Indices', ICAART, Rome, Italy, January 2011 (9% acceptance)
32. **U. Weerakoon and **V.H. Allan**. 'Influence of Neighborhood and Reorganization in Networked Agent Simulation', ICAART, Rome, Italy, January 2011. (Poster)
33. **L. Barton and **V.H. Allan**, Adapting to Changing Resource Requirements for Coalition Formation in Self-Organized Social Networks, International Conference on Intelligent Agent Technology (IAT-2008), Sydney, Australia, December 2008. (18% full paper acceptance, 29% short paper acceptance)
34. **D. Stormont and **V. H. Allan**, Managing Risk in Disaster Scenarios with Autonomous Robots, Risk Management and Cyber-Informatics, (RMCI/WMSCI 2008), Orlando, Florida, June 2008. Best Paper Award.
35. **L. Barton and **V.H. Allan**, Information Sharing in an Agent Organized Network, Intelligent Agent Technology (IAT-2007), November 2007, Silicon Valley, California. (20% full paper acceptance, 28% short paper acceptance)
36. **V.H. Allan** and **K. Westwood, Who Works Together in Agent Coalition Formation? Cooperative Information Agents (CIA-07), September 2007, Delft, The Netherlands (Accepted approximately 50% of the submissions)
37. ** L. Barton and **V.H. Allan**, Methods for Coalition Formation in Adaptation-Based Social Networks, Cooperative Information Agents (CIA-07), September 2007, Delft, The Netherlands (Accepted approximately 50% of the submissions)
38. **K. Westwood and **V.H. Allan** "Heuristics for Dealing with a Shrinking Pie in Agent Coalition Formation", IAT 2006, December 2006, Hong Kong, China. (Accepted approximately 25 % of the 281 submissions)
39. **K. Westwood and **V.H. Allan**, Heuristics for Co-opetition in Agent Coalition Formation, SCAI 2006, October 2006, Helsinki University of Technology, Finland. (60% acceptance)
40. **S.S. Nemani and **V.H. Allan**, MATES: A Conversational Agent System, ACE 2004 Affective Computational Entities at the 17th European Meeting on Cybernetics and Systems Research ([ACE 2004](#) at EMCSR 2004) April 13th, 2004, Vienna, Austria
41. **Pankaj Gupta and **V.H. Allan**, Performance Analysis of an Acyclic Genetic approach to Learn Bayesian Network Structure , Indian International Conference on Artificial Intelligence (IICAI-03), Hyderabad, India, Dec 18-20, 2003. (20% acceptance rate)
42. **Pankaj Gupta and **V.H. Allan**, The Acyclic Bayesian Net Generator , Indian International Conference on Artificial Intelligence (IICAI-03), Hyderabad, India, Dec 18-20, 2003. (20% acceptance rate)
43. **S.S. Nemani and **V.H. Allan**, Agents and the Algebra of Emotion , Second International Joint Conference on Autonomous Agents and Multagent Systems (AAMAS 2003), July 14-18, 2003 Melbourne, Australia. Poster Presentation (24% acceptance regular, 32% acceptance poster)

44. **V.H. Allan**, **V.K. Balimidi, and **R. Janakiraman, Using Directed Hypergraphs to Implement Overriding Rules in Expert Systems , Twelfth Midwest Artificial Intelligence and Cognitive Science Conference (MAICS'2001), Oxford, Ohio, Mar 31-Apr 1, 2001.
45. **X. Chen, **V.H. Allan**, Distributed Synchronization in Multijav , First International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT'2000), Kowloon, Hong Kong, on May, 22-24, 2000.
46. **X. Chen and **V.H. Allan** MultiJav: A Distributed Shared Memory System Based on Multiple Java Virtual Machines , The 1998 International Conference on Parallel and Distributed Processing Technique and Applications (PDPTA'98) July 13-16, 1998, Las Vegas, Nevada, USA. (approximately 24% acceptance rate)
47. **V.H. Allan**, **U.R. Shah, and **K.M. Reddy, Petri Net versus Modulo Scheduling for Software Pipelining , Proceedings of the 28th International Symposium and Workshop on Microarchitecture (MICRO-28), November 29 - December 1 1995, Ann Arbor, Michigan.
48. **M.R. O'Neill, **V.H. Allan**, N. Flann, H. Chen, Petri net representation for parallel loop scheduling: using a genetic algorithm , The 14th Workshop of the UK Planning and Scheduling Special Interest Group, Colchester, UK, November 22-23, 1995.
49. **M. Srinivas, A. Nicolau and **V. H. Allan**, An Approach to Combine Predicated/Speculative Execution for Programs with Unpredictable Branches , International Conference on Parallel Architectures and Compilation Techniques, August 24-26, 1994, Montreal, Canada. (approximately 21% acceptance rate)
50. **V.H. Allan** and **M.R. O'Neill, Software Pipelining: A Genetic Algorithm Approach , International Conference on Parallel Architectures and Compilation Techniques, August 24-26, 1994, Montreal, Canada. (approximately 21% acceptance rate)
51. **M. Rajagopalan and **V. H. Allan**, Efficient Scheduling of Fine Grain Parallelism in Loops , Proceedings of the 26th International Symposium and Workshop on Microarchitecture (MICRO-26), 2-11, Dec. 1993. (33% acceptance)
52. **V.H. Allan**, **M. Rajagopalan, and **R.M. Lee Software Pipelining: Petri Net Pacemaker, IFIP Working Conference on Architectures and Compilation Techniques for Fine and Medium Grain Parallelism, Orlando, Florida, January 1993.
53. **R.M. Lee and **V.H. Allan**, Advanced Software Pipelining and the Program Dependence Graph , Fourth IEEE Symposium on Parallel and Distributed Processing, Dallas, Texas, December, 1992
54. **V. H. Allan** and **J. Janardhan and **R.M. Lee and **M. Srinivas, Enhanced Region Scheduling on a Program Dependence Graph , Proceedings of the 25th International Symposium and Workshop on Microarchitecture (MICRO-25), Portland, OR, December 1-4, 1992. (26% acceptance)
55. **R. B. Jones and **V.H. Allan**, Software Pipelining: An Evaluation of Enhanced Pipelining The 24th International Symposium and Workshop on Microarchitecture (MICRO-24), Albuquerque, New Mexico, November 18-20, 1991.
56. **R. B. Jones and **V.H. Allan**, Software Pipelining: A Comparison ,23 nd International Symposium and Workshop on Microprogramming and Microarchitecture (MICRO-23), Orlando, Florida, November 27-29 1990.
57. R.A. Mueller and **V.H. Allan**, Phase-Coupled Methods in Automated Microcode Generation: Assessment and Strategy, Proceedings of the 19th International Systems Science Conference , Honolulu, HA, January 1986.

Refereed Workshops

(Acceptance based on submission of full article.)

*(I am the major professor for individuals marked with **)*

1. K Searle & C. Tofel-Grehl & V. H. Allan, Using Electronic Textiles to Train Teachers to Build Models While Teaching Core Content, 2017 NARST *National Association for Research in Science Teaching Conference*. (70% acceptance), San Antonio, TX Apr 2017.
2. ****K. Ahmadi** and V. H. Allan, "Decision Making Using Trust and Risk in Agent Societies", in Computing Research Association Workshop (CRA-W 2014), Poster, Santa Clara, CA, US, April 2014.
3. ****K. Ahmadi** and V. H. Allan, "Trust Assessment in Agent Organizations", in Grace Hopper 2014 (GHC 2014), Phoenix, AZ, US, October 2014 (poster). (Acceptance Rate 22 %).
4. ****K. Ahmadi** and V. H. Allan, "Self Organization in Multi Agent Systems", in Computing Research Association (CRA-W 2012), Poster, Seattle, WA, US, April 2012.
5. ****R. Lasisi** and **V. H. Allan**, False Name Manipulations in Weighted Voting Games: Susceptibility of Power Indices, Autonomous Agents and Multi Agent Systems 2010 (AAMAS-2010) Workshop on "Trust in Agent Societies" (Trust-2010), Toronto, Canada, May 2010.
6. **V.H Allan**, V. Barr, D. Brylow, and S. Hambrush, Computational Thinking in High School Courses, SIGSCE'10, March 10-13, 2010, Milwaukee, Wisconsin, USA. ACM 978-1-60558-885-8/10/03
7. **V.H. Allan**, Peephole Optimization as a Targeting and Coupling Tool , 22nd Microprogramming Workshop (MICRO-22), Dublin, Ireland, August 1989.
8. ****Pantung Wijaya** and Vicki H. Allan, Incremental Foresighted Local Compaction , 22nd Microprogramming Workshop (MICRO-22), Dublin, Ireland, 1989.
9. V.H.Allan, Data Dependency Graph Bracing, Proceedings of the 21st Microprogramming Workshop (MICRO-21) , San Diego, CA, December 1988.
10. **V.H. Allan** and R.A. Mueller, Phase Coupling for Horizontal Microcode Generation, Proceedings of the 20th Microprogramming Workshop (MICRO-20) , Colorado Springs, CO, December 1987.
11. R.A. Mueller, J. Varghese, and **V.H. Allan**, Global Methods in the Flow Graph Approach to Retargetable Microcode Generation, Proceedings of the 17th Microprogramming Workshop (MICRO-17) , New Orleans, LA, November 1984, 275-284.

Refereed Teaching Publications

(Acceptance based on submission of full article.)

1. DuHadway, L. P. & Allan, V. H. (2014, August). Using Opportunities to Mentor as a Method to Encourage Increased Participation of Women in STEM Fields. Poster session presented at the CIRCLE Conference, Washington University, St. Louis, MO.
2. R Bryce and **V. H. Allan**. "Mystery Bug Theater", Conference on Software Engineering Education and Training, CSEE&T, May 22-24, 2011. Honolulu, Hawaii

3. C. Mano, **V.H. Allan**, and D. Cooley, “Effective In-Class Activities for Middle School Outreach Programs,” Proceedings of Frontiers in Education, October 2010, Arlington, Virginia.
4. **V.H. Allan** and M.V. Kolesar, Teaching Computer Science: A Problem Solving Approach that Works, National Educational Computing Conference, Minneapolis, MN, June 11-13, 1996. (reprinted as **V.H. Allan** and M.V. Kolesar, Teaching Computer Science: A Problem Solving Approach that Works , SIGCUE Outlook, Vol 25, #1-2, January/April 1997, pp. 2-10.)
5. M.V. Kolesar and **V.H. Allan**, Teaching Computer Science Concepts and Problem Solving with a Spreadsheet , SIGSCE '95, March 2-4, 1995, Nashville, TN.

Refereed Textbook Chapters/Articles

1. **V.H. Allan** and S.J. Allan, Software Pipelining, Chapter in Compiler Design Handbook , CRC Press, Editors: Y.N. Srikant and P. Shankar. September 2002.
2. **V.H. Allan**, Firmware: Automated Microcode Generation, Encyclopedia of Microcomputers , Allen Kent and James G. Williams, editors, Rosalind Kent and Carolyn M. Hall, editors, Marcel Dekker, Inc., 1991.
3. **V.H. Allan**, Data Dependency Graph Bracing, Introduction to Microprogramming, Veljko Milutinovic, editor, Prentice-Hall, 1992.

Technical Reports and Structured Posters

1. Clarke-Midura, J., Pantic, K., Poole, F., Allan, V., Dorwood, J., & Hamilton, M. Making Apps: A Near Peer Mentoring Program for Girls. In *K. A. Searle & B. K. Litts Making at the Margins: Engaging Underserved Communities in Maker Technologies, Activities, and Spaces* (Structured Poster Session). AERA (New York, NY), April 2018.
2. Gardner, Matthew (2013) A Qualitative And Evaluative Study On Recruiting And Retaining Students In College Computer Science Programs, Unpublished Master’s thesis, Utah State University, USA
3. Jamwal, Goldee (2012), Effective Use Of Interactive Learning Modules In Classroom Study In Computer Science, Unpublished Master’s thesis, Utah State University, USA
<http://digitalcommons.usu.edu/gradreports/318/>
4. Neema, Milan (2010) Creation And Evaluation of Interactive Learning Modules For Computer Science Education, Unpublished Master’s Thesis, Utah State University, USA.
<http://digitalcommons.usu.edu/gradreports/317/>
5. Feuz, Kyle, (2011) Pedestrian Leadership And Egress Assistance Simulation Environment (PLEASE), Unpublished Master’s Thesis Utah State University.
6. Lasisi, Ramoni (2013) Experimental Analysis Of The Effects Of Manipulations In Weighted Voting Games, Unpublished Doctoral Dissertation, Utah State University

Invited Conferences

1. NCWIT Summit, Grapevine, Texas, May 15-17, 2018
2. NCWIT Summit, Tucson, Arizona, May 20-22, 2013.

3. National Science Foundation, Workshop on Expanding Opportunities for Women in the Computing Sciences, Colorado Springs, CO, October 25-27, 1992.
4. National Science Foundation, Division of Undergraduate Education, Project Impact: Enhancing Reform in Undergraduate Education. , May 31, 1994-June3, 1994. All expenses paid. Represented by Mary Veronica Kolesar.

Invited Presentations

5. **V.H. Allan, R. Weeks**, NSF Showcase, Computational Thinking Showcase: Computing Concepts Across the Curriculum, SIGSCE'10, Exhibition Session, March 10-13, 2010, Milwaukee, Wisconsin, USA
6. Grace Hopper panel member, [ACM-W Chapters: Communities for Students in Computer Science](#) , Chicago, Illinois, October 6-9, 2004.
7. IWA (Institute Women's Association), Women's Conference, Keynote speaker, "The Importance of Education," February 7, 2004, Logan, Utah.
8. The Dearth of Women in Computer Science: Facts and Fiction, KUSU, Public Radio, October 20, 1995.

Publications Highlighting CPATH Work

9. *D. Anderson*, Computational Learning: Create Interactive Learning Modules for Your Students, ISTE 2010, June 27-30, 2010

Non-Refereed Journal/Conference Articles

10. **V.H. Allan** and R.B. Jones, Software Pipelining Improvements, Utah Academy, Arts, and Letters.
11. R.B. Jones and **V.H. Allan**, Software Pipelining: An Introduction , IEEE Microarch Newsletter, November 1990, Volume 5, Number 2.

Professional Activities

Contracts and Grants

1. National 4-H Council, 11/15/19-11/15/20, (Deborah Ivie, PI), \$9,000.
2. US Department of Education, Utah State University STARS! GEAR UP Partnership Cohort Four, \$16,871,200, 10/1/18-9/30/25, (James Dorward PI, Vicki H Allan, Jody Clark Midura, Gregory Wheeler, KimberLeigh Hadfield CO-PIs)
3. NSF Itest: \$798,565, 8/30/16-9/30/20, (Jody Clarke-Midura, PI, David Feldon Co-PI)
4. App Girls, Aspire IT, NCWIT, **\$2,000**, 6/2016-7/2016. (Megan Humphries, Jody Clarke Midura) Joint-PIs
5. App Girls Mentors, Aspire IT, NCWIT, **\$3,000**, 6/2016-7/2016. (Ami Iverson, Jody Clarke Midura) Joint-PIs
6. App Girls, Aspire IT, NCWIT, **\$800**, 9/2015-12/2015. (Olivia Richards) Joint-PI
7. App Camp Labs, Utah Stem Action Center (Jody Clarke-Midura Co-PI), (\$3000), 1/4/16-6/30/16
8. Integration of Computing with Electronic Textiles to Improve Teaching and Learning of Electronics in Secondary Science, Colby Tofel-Grehl (PI), **(\$1,078,533)**, 9/1/15-9/30/19.
9. App Girls, Aspire IT, NCWIT, **\$3,000**, 6/2014-7/2014. (Olivia Richards, Jody Clarke Midura) Joint-PIs

10. App Girls, Aspire IT, NCWIT, **\$3,000**, 6/2014-7/2014. (Andrea Castillo, Linda Duhadway) Joint-PIs
11. CPATH CB: Computational Thinking Showcase: Computing Concepts Across the Curriculum, RET SUPPLEMENT NSF/IIS, **\$27,000** PI, (Donald Cooley, Joel Duffin) Co-PIs, 6/2010-9/2013.
12. COAL: Coalition Organization with Agent Leadership, REU SUPPLEMENT NSF/IIS, **\$16,000** PI 6/2009-9/2013
13. CPATH CB: Computational Thinking Showcase: Computing Concepts Across the Curriculum, REU SUPPLEMENT NSF/IIS, **\$16,000** PI, (Donald Cooley, Chad Mano, Joel Duffin) Co-PIs, 6/2009-9/2013.
14. CPATH CB: Computational Thinking Showcase: Computing Concepts Across the Curriculum, RET SUPPLEMENT NSF/IIS, **\$50,000** PI, (Donald Cooley, Chad Mano, Joel Duffin) Co-PIs, 6/2009-9/2013
15. CPATH CB: Computational Thinking Showcase: Computing Concepts Across the Curriculum, NSF/IIS, **\$440,000** PI, (Donald Cooley, Chad Mano, Joel Duffin) Co-PIs, 9/2008-9/2013.
16. COAL: Coalition Organization with Agent Leadership, NSF/IS, **\$258,788**, PI. 9/2008-9/2013.
17. Cooperative Agents with Personalities: Negotiating Agents and Marital Stability, CURI, Community/University Research Initiative (CURI). The Community/University Research Initiative (CURI) funds are designed to improve the lives of citizens in the State of Utah. **\$24,000**, 2003-2004.
18. Cooperative Agents with Personalities: Negotiating Agents and Marital Stability, CURI. The Community/University Research Initiative (CURI) funds are designed to improve the lives of citizens in the State of Utah. **\$25,000**, 2002-2003
19. Management Science, Bayesian Nets, 09-00-00 to 12-31-00, **\$25,000**.
20. Management Science, Rule Entry System, 6-15-00 to 9-15-00, **\$19,153**.
21. Integration of Media Watermarking and Hashing into Sun's Security, Sun Microsystems, 9-1-99 to 9-1-00, **\$20,655**.
22. Rule Entry System, Management Sciences Inc., 10-1-98 to 6-30-00, **\$74,513**.
23. Software reuse and performance evaluation in Java. Boeing, 12-22-97 to 6-30-99, **\$50,011**.
24. Register Allocation with Instruction Level Parallelism, National Science Foundation (RPG-CAA), 1995-1996, **\$17,995**.
25. A First Course in Computer Science. National Science Foundation (USEME), 1993-1995, (PI with Mary Veronica Kolesar), **\$74,993**.
26. Research Experiences for Undergraduates. National Science Foundation, 1993, (with Stephen Allan (PI), Scott Cannon), **\$59,231**.
27. Utah State University Proposal to Support Academic Program Enhancement, "A Freshman Course in C++", **\$12,800**.
28. Coalition to Increase Minority Doctorates (**\$1,761**), received September 1992. [The CIMD is a \$5 million five year cooperative agreement from the National Science Foundation (NSF) to increase the number of underrepresented minority students who receive baccalaureate and doctorate degrees in mathematics, the sciences, and engineering.]
29. Research Experiences for Undergraduates. National Science Foundation, 1992, (PI with Stephen Allan, Scott Cannon, Don Cooley), **\$66,852**.

30. Research Experiences for Undergraduates. National Science Foundation, 1991, (PI with Stephen Allan, Scott Cannon), **\$59,639.**
31. Research Experiences for Undergraduates. National Science Foundation, 1989, (With Robert Campbell (PI), Stephen Allan, Scott Cannon), **\$40,000.**
32. Research Experiences for Undergraduates. National Science Foundation, 1988, (With Robert Campbell (PI), Stephen Allan, Scott Cannon), **\$40,000.**
33. Microcode Compaction and Optimization with General Synchronous Timing. Utah State University, 1987--1988, **\$14,435.**

Travel Awards

34. NCWIT Summit (\$2000) Grapevine Texas, May 2018
35. NCWIT Summit, (\$2000), Tucson, Arizona, May 2013
36. CAPP Cohort of Associate Professor Project , (**\$1000**), Fort Myers, Florida, Oct 2006.

USU Committees

USU Committee Chair

1. Chair USU faculty Search Committee 2023-2024, Hired Wen Li and Yang Shi
2. Chair USU faculty Search Committee 2020-2021 Hired Isaac Cho and Hamid Karimi.
3. Chair USU faculty Search Committee 2019-2020 Hired Shuhan Yuan.
4. Chair department Undergraduate Curriculum Committee, 2014-2018
5. Chair Faculty Search Committee, 2013-2014, hired, Eun-Kyu Lee (later canceled) and Young-Woo Kwon
6. Chair Faculty Search Committee for Computer Science, 2007-2008, hired Renee Bryce, Daniel Bryce.
7. Chair Faculty Search Committee for Computer Science, 2004-2005, hired Jerry James, Changhui Yan, and Minghui Jiang.
8. Chair of search Committee for Computer Science Advisor, 2003, Hired Myra Cook
9. Chair of Women and Gender Research Institute (6/03 - 8/06). Administer yearly budget of \$34,000 for travel for women faculty. Organize university wide committees for faculty women brown bags, distinguished professor awards, fall social, promotion awards, and spring luncheon.
10. Chair of search Committee for Computer Science Advisor, 2002, hired Judy Swaner
11. 1999-2000 USU faculty senate president (elected)
12. 98-99 USU faculty president-elect (elected)
13. 98-99 chair of the Faculty Evaluation committee.

Advisor for ACM-W

1. Created an ACM-W group on campus in 2000.
2. Served as advisor, 2000-2009, 2013 - present
3. Attend bi-weekly officers meeting, monthly events, and national conventions

Professional Service (External)

Referee

1. MDPI (2026) (1 paper)
2. ICAART (2026) (5 papers)
3. ITiCSE (2026) (1 paper)
4. AAMAS (2025) (4 papers)
5. ICAART (2025) (3 papers)
6. SIGSCE (2024) (3 papers)
7. Electronic Commerce Research and Applications (2024) (2 papers)
8. Reviewer NSF Grants (Fall 2023) (5 proposals)
9. ICAART (2024) (5 papers)
10. AGNT (2023) (1 paper)
11. ICAAI (2023) (3 papers)
12. International Journal of Geo-Information (2023) (1 paper)
13. International Journal of Geo-Information (2024) (1 paper)
14. Cambridge Data Structures (2023) (text review)
15. Electronic Commerce Research and Applications (2023) (1 paper)
16. Future Transportation (2023) (1 paper)
17. Reviewer for Computer Networks (2024) (1 paper)
18. IGJI (2023)(1 paper)
19. Reviewer SIGCSE (2023)(3 papers)
20. Journal on Empowering Teaching Excellence (2023) (1 paper)
21. Data in Brief (2022) (1 paper)
22. Journal of Computers in Education reviewer (2022) (1 paper)
23. SoftwareX (2022)
24. NCWIT Aspirations Awards (2021) (72 applicants)
25. INFOCOM 2020 Reviewer
26. ICCART 2022 Reviewer (2022) (5 papers)
27. ICCART 2021 Reviewer (2021) (6 papers)
28. ICCART 2020 Reviewer (2020) (6 papers)
29. ICCAI 2020 Reviewer (2019) (2 papers)
30. NCWIT Aspirations Awards (2020) (104? applicants)
31. Journal of Computers in Education reviewer (2019) (2 papers)
32. NCWIT Aspirations Awards (2019) (100 applicants)
33. ICCAI 2019 Reviewer (2018) (3 papers)
34. NCWIT Aspirations Awards (2018) (65 applicants)
35. ICCAI 2018 Reviewer (2017) (3 papers)
36. Reviewer for NCWIT National Aspirations Collegiate Awards (2018) (10 applicants)
37. Reviewer for Autonomous Agents and Multi-Agent Systems (5 AGNT)
38. Reviewer for Frontiers in Education 2017 (2 papers)
39. Reviewer for ICAART 18 (3)
40. Reviewer NSF Panel, March, 2017 (9 proposals)
41. Advisory Board, Kasun 2017 (NSF proposal)
42. Reviewer for ICAART 17 (3 papers)
43. Reviewer for NCWIT National Aspirations Awards (2017) (90 applicants)
44. Reviewer for NCWIT National Educator Awards (2017) (8 applicants)

45. Program Committee for ARIA-2017 **Fourth International Conference on Artificial Intelligence & Applications (review 1 paper)**
46. Reviewer for ICAART 16 (6 papers)
47. Reviewer for ICIAI (2 papers)
48. Reviewer for TCCI16 (2 papers)
49. Reviewer for FEC16 (1 papers)
50. Reviewer for Computing Surveys (1 paper)
51. Reviewer for TCCI16 (1 paper)
52. Reviewer for FIE16 (1 paper)
53. Reviewer for ICAART 2016 (2 paper)
54. Reviewer for FIE15 (2 papers)
55. Reviewer for Grace Hopper Scholarships 2015 (10 applicants)
56. Reviewer for NCWIT National Collegiate Awards (2015) (3 applicants)
57. Reviewer for ICAART 2015 (4 papers)
58. Reviewer for Doctoral Degrees Board, Cape Town 10/2014
59. Reviewer for Grace Hopper Scholarship 2014 (15 applications)
60. Reviewer for JAAMAS, 2014 (2 papers)
61. Reviewer for FIE, 2014 (2 papers)
62. Reviewer for JAAMAS, 2013
63. Reviewer for NSF STEM Proposal, 2013
64. Reviewer for ACM TACO, ACM Transactions on Architecture and Code Optimization, 2013.
65. International Conference on Agents and Artificial Intelligence ICAART 2014
66. Frontiers in Education Conference FIE 2013 (2 papers)
67. Aspirations in Computing (NCWIT), Reviewer 2012
68. NSF (CISE), Panel 2011
69. NSF(CISE, special project review) Panel 2010
70. NSF(CISE) Panel 2010
71. NSF(CISE) Panel 2009
72. NSF(IIS) Panel 2008
73. APLAS (2008)
74. Grace Hopper Poster Session Judge (2007)
75. Software Practice and Experience (2002)
76. PDPTA (2001)
77. Software Practice and Experience (2001)
78. International Journal on Parallel Programming (2000)
79. JPDC (2000)
80. PLDI '00 (2000)
81. International Journal on Parallel Programming (1999)
82. IEEE Concurrency (1998)
83. IEEE Software
84. Computer Magazine
85. Transactions on Computers
86. Micro-21, Micro-23, Micro-24, Micro-25
87. Microprogramming Texts
88. IBM "Best Paper Award 1990"

89. ASPLOS-V
90. HICSS-26
91. Symposium on Parallel and Distributed Processing (SPDP) 1993 (4 papers)
92. IEEE Parallel and Distributed Technology
93. NSF UCC 1993 Evaluation of Grants (15 grants)
94. Micro-26 (10 papers)
95. Micro-27 (8 papers)
96. International Journal of Parallel Processing (2-3 papers)
97. TOPLAS (2 papers)
98. HICSS-28 (9 papers)
99. HICSS-29
100. Concurrency: Practice and Experience
101. NSF CCR Grant Evaluation - 4/95
102. Transputer Communications
103. International Journal of Parallel Processing 11/96
104. NSF POWRE/CISE/CCR Grant Evaluation - 8/97
105. PACT 98 - 1 paper

National/International Committees Chair

1. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2025-2026 state of Utah Awarded 11 Winner, 14 Honorable Mention, and 7 Rising Stars
2. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2024-2025 state of Utah Awarded 23 Winner and 22 Honorable Mention, and 16 Rising Star
3. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2023-2024 Awarded 15 Winner and 20 Honorable Mention, and 21 Rising Star in the state of Utah
4. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2022-2023 Awarded 16 Winner and 30 Honorable Mention, and 20 Rising Star in the state of Utah
5. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2021-2022 Awarded 16 Winner and 30 Honorable Mention, and 20 Rising Star in the state of Utah
6. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2020-2021 Awarded 16 Winner and 30 Honorable Mention, and 20 Rising Star in the state of Utah
7. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2019-2020 Awarded 16 Winner and 30 Honorable Mention, and 20 Rising Star in the state of Utah
8. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2018-2019 Awarded Winner and Runners Up in the state of Utah
9. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2017-2018 Awarded Winner and Runners Up in the state of Utah
10. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2016-2017 Awarded Winner and Runners Up in the state of Utah
11. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2015-2016 Awarded winners and Runners Up in the state of Utah
12. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2014-2015. Awarded winners and Runners Up in the state of Utah.

13. NCWIT Aspirations Award Committee, Chair of Northern Utah Affiliate, 2013-2014. Awarded 10 winners and 11 Runners Up in the state of Utah. [The award was split into two affiliates after 2013.]
14. NCWIT Aspirations Award Committee, Chair of Utah Affiliate, 2012-2013. Awarded 10 winners and 10 Runners Up in the state of Utah.

National/International Committees

1. NSF Career Grant Review Committee, 2023 (7 proposals)
2. NSF AISL review committee, 2021, reviewed 11 applications.
3. Grace Hopper Celebration of Women in Computing 2015 Scholarship Committee.
4. Program Committee International Conference on Agents and Artificial Intelligence ICAART 2020
5. Program Committee International Conference on Agents and Artificial Intelligence ICAART 2019
6. Program Committee International Conference on Agents and Artificial Intelligence ICAART 2018
7. Program Committee International Conference on Agents and Artificial Intelligence ICAART 2017
8. Program Committee International Conference on Agents and Artificial Intelligence ICAART 2016
9. Program Committee Rocky Mountain Celebration of Women in Computing (RMCWiC), Salt Lake City, 2016, celebration designers. (Helen Hu, Chair).
10. Technical Program Committee, Frontiers in Education, FIE, (2015)
11. Program Committee Rocky Mountain Celebration of Women in Computing (RMCWiC), 2014 (review 3 papers)
12. Program Committee International Conference on Agents and Artificial Intelligence ICAART 2015
13. Frontiers in Education (FIE) 2014, Technical Program Committee Member.
14. Program Committee International Conference on Agents and Artificial Intelligence ICAART 2014
15. NCWIT Summit, May 20-23, Tucson, Arizona.
16. Grace Hopper Utah Regional Consortium Committee, 2013
17. NCWIT Academic Alliance Group Member, 2012
18. Program Committee of WMSCI 2009.
19. Participant in Utah Women in Computer Science Program Advisory Committee, 2007.
20. Grace Hopper 2007, PhD Forum co-Chair with Julita Vassileva, Orlando, Florida, 2007.
21. Program Committee for a Special Session on the Use of Java in Education for PDPTA 2001: Parallel and Distributed Programming Techniques and Applications
22. National Science Foundation, Served on the proposal review committee FY98 POWRE/CISE/CCR, Arlington, VA, August 12-13, 1997.

23. Advisory committee for 29th Hawaii International Conference on System Sciences (HICSS-29) Maui, HAWAII, January 9-12, 1996.
24. PACT '96 Program Committee. The fourth International Conference on Parallel Architectures and Compilation Techniques (PACT '96) .
25. Mentor in CRA Distributed Mentor Program funded by the National Science Foundation, 1994.
26. Program chair for Micro-23 (1990).
27. Advisory committee for IEEE TC on Microprogramming and Microarchitecture.
28. National Science Foundation, reviewed proposals for FY 1994 Undergraduate
29. Course and Curriculum Development Program (UCC), July 12-15, 1993, Washington D.C.
30. Steering committee for Micro-24 (1991), Micro-25 (1992), Micro-26 (1993), Micro-27 (1994), and Micro-28 (1995), Micro-29 (1996).

External Review

External Reviewer, Brigham Young University, Curriculum and Research Evaluation, 2025
Reviewer Transactions on Architecture and Code Optimization, 2013 (review one paper)
External reference in tenure decision (Southern Utah University)
External reference in tenure decision (Michigan Tech), 2010
External evaluation for PhD Candidate in Nigeria (2010)

Classes Taught

1. Introduction to Java Programming
2. Seminar: So you're getting your PhD?
3. Game Theory
4. Advanced Multi-agent Systems
5. Multi-agent Systems
6. Programming Languages
7. Data Structures
8. Advanced Algorithms
9. Parallel Algorithms
10. C++ Programming
11. Java Programming
12. Parallel Programming
13. A First Course in Computer Science