

Richard Blumenthal

rblument@regis.edu

Professor, Chair Computer Science | Anderson College of Business and Computing | Regis University
Email: rblument@regis.edu | W: 303-458-4304

Education

Ph.D. Computer Science, The University of Colorado, Boulder, CO, 1998.

Dissertation: Supporting Unstructured Activities with a Meta-Contextual Protocol in Situation-Based Workflow

M.S. Computer Science, Rutgers University, Piscataway, NJ, 1985.

B.S. Computer Science, Lock Haven State, Lock Haven, PA, 1983.

Academic Experience

Regis University College of Computer & Information Sciences,

Professor, Computer Science

1/02 – Present

Chair, Computer and Cyber Sciences

6/14 – Present

Responsible for:

- overseeing, managing, and setting strategic direction for Faculty and Staff supporting the B.S. in Computer Science (ABET accredited), B.S. in Cybersecurity, and M.S. in Information and Cybersecurity,
- teaching undergraduate classroom & online Computer Science courses,
- developing CS curriculum including online virtual classroom courses,
- university committee and professional community service.

University of Colorado at Boulder Continuing Education, Lecturer, 9/89-9/90

Responsible for teaching an Introduction to Artificial Intelligence course.

Rutgers University, Teaching Assistant, 9/83 – 5/84

Taught recitation sections of Introduction to Computer Science for Non-Majors.

Industry Experience

Athene Software, Senior Software Engineer,

12/99 – 8/01

Design and implementation of a Web-based multi-tier (HTML, JavaScript, EJB, SQL) intelligent customer retention workflow application.

U S WEST Advanced/Information Technologies, 11/86 - 12/99

Member Technical Staff: Developed Artificial Intelligence (AI) applied research applications including: a dialogue-based Intelligent Tutoring System for training customer sales representatives, a Knowledge-Based indexing system for categorizing information services, and a Rule-Based system for checking equipment constraints,

Technical Lead: Responsible for all phases of production-level software development and the management of junior developers for multi-tiered Web applications including: an AI rule-based constraint authoring and service order execution application, a rule-based consultative sales application, and an e-commerce sales application.

AT&T Bell Laboratories, Member Technical Staff, 5/84 - 11/86

Designed and prototyped Artificial Intelligence research applications including several knowledge-based 'expert system' infrastructures to support internal clients.

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Dissertation

Blumenthal, R. L., (1998). *Supporting Unstructured Activities with a Meta-Contextual Protocol in Situation-Based Workflow*. Unpublished doctoral dissertation, University of Colorado, Boulder.

Refereed Publications

Blumenthal, R. and Blumenthal, J. (2021). Consider visualizing society within the ACM Code of Ethics. [Poster presentation]. *Proceedings of the 51st ACM Technical Symposium on Computer Science Education SIGCSE'20*. Portland Oregon.

Goldweber, M., Kaczmarczyk, L., and Blumenthal, R., (2019). Computing for the social good in education. *ACM InRoads 10* (4), 24-29.

Urman, J. and Blumenthal, R. (2018). An undergraduate ethics course for promoting common good computing: A progress Report. *The Journal of Computing Sciences in Colleges* 34 (2), 39-45.

Blumenthal, R. (2014). Using design patterns to address curricular growth issues, *The Journal of Computing Sciences in Colleges* 30 (2), 85-94.

Blumenthal, R. & Blumenthal, J.E. (2010). Using dialogue contexts to support the tutoring of ethics. *Proceedings of Artificial Intelligence and Applications AIA 2010*, Innsbruck, Austria, 271-278,

Blumenthal, R. (2009). The effect of semistructured design rationale messages on structuring collaborative problem-solving in an online forum. *Journal of Information Technology Impact*, 9(1), 1-24.

Blumenthal, R. & Karamouzis, S. (2008). A behavioral model for tutoring ill-defined design tasks with multiple dialogue agents. *Proceedings of the 11th IASTED International Conference: Computers and Advanced Technology in Education*, Crete, Greece, 256-261.

Sparks R., Dooley S., Meiskey L., & Blumenthal, R., (1999). The LEAP Authoring Tool: supporting complex courseware authoring through reuse, rapid prototyping, and interactive visualizations. *International Journal of Artificial Intelligence Education*, 10, 75-97.

Blumenthal, R., & Nutt, G. (1995). Supporting unstructured workflow activities in the Bramble ICN system. In N. Comstock & C. Ellis (Eds.), *Proceedings of COCS'95 conference on Organization computing systems* (pp. 130-137). Milpitas, CA.

Laufmann, S., Blumenthal, R., Thompson, L., & Bowen, B. (1991). Direct end-user access to remote information, In F. Lochovsky (Ed.), *Proceedings of COCS'91 the conference on Organizational computing systems* (16-28). Atlanta, Georgia.

Blumenthal, R. (1990). Artificial intelligence in telecommunications. In J.J. Richardson & M.J. DeFries (Eds.), *Intelligent systems in business: Integrate the technology* (pp. 201-217). Norwood, NJ: Ablex.

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- Blumenthal, R., Laufmann, S., & Freeman, E., (1990). OOOFs: A metamorphosis from objects to knowledge-based agents. In *Proceedings of the Bellcore Object Oriented Systems and Technology (BOOST) Conference* (pp. 157-166). New Brunswick, NJ.
- Blumenthal, R. (1988). Rule inheritance in a frame-based paradigm. In M. Trivedi (Ed.), *Proceedings of Applications of Artificial Intelligence IV* (pp. 607-613). Orlando, FL.
- Ensor, J.R., & Blumenthal, R. (1987). Custom: an expert system editor. In *Proceedings of the 1987 Rocky Mountain Conference on Artificial Intelligence* (279-288). Boulder, CO.
- Joseph, R. L., Ensor, J. R., Dickinson, A., and Blumenthal, R., (1986). Describe: An explanation facility for an object-based expert system. In *Proceedings of Second Artificial Intelligence and Advanced Computer Technology Conference*. Long Beach, CA.

Refereed Workshop Publications

- Laufmann, S. C., Nathan, M. J., and Blumenthal, R., (1991). An architecture to support cooperation among coarse-grained distributed problem solvers. *Proceedings AAAI-91 Workshop on Cooperation Among Heterogeneous Intelligent Agents*. Anaheim, CA.
- Laufmann, S. & Blumenthal, R. (1988). GROMS: a system for modeling network structures. In *Proceedings IEEE '88 Globecom Workshop in the Application of Network Technology*.
- Blumenthal, R., Meiskey, L., Dooley, S., and Sparks, R., (1996). *ITS '96 Workshop on Architectures and Methods for Designing Cost-Effective and Reusable ITSs*. Montreal, Canada.
- Mahling, D., Woo, C., Blumenthal, R., Schlicker, H., & Horstman, T. (1995). Workflow = OIS? A report of a workshop at the CSCW '94 conference, *SCM SIGIOS Bulletin*, 161, 59-64.
- Dooley, S., Meiskey, L., Blumenthal, R., & Sparks, R. (1995). Developing reusable intelligent tutoring system shells. In *Proceedings of the AIED-95 Workshop for Authoring Shells for Intelligent Tutoring Systems*. Washington, DC.
- Laufmann, S. C., Nathan, M. J., Blumenthal, R., (1991). An architecture to support cooperation among coarse-grained distributed problem solvers. In *Proceedings of the AAAI-91 Workshop on Cooperation Among Heterogeneous Intelligent Agents*. Anaheim, CA.
- Cox, L.A., & R. Blumenthal, (1987). "KRIMB: An intelligent knowledge acquisition and representation program for interactive model building. In T. Addis et al.(Eds.), *Proceedings of the First European Workshop on Knowledge Acquisition for Knowledge-Based Systems*. Reading, England.

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Cox, L.A., Jr. & Blumenthal, R. (1987). Dynamic planning under uncertainty using automated model construction and risk analysis. In *Proceedings of the 1987 Workshop on Simulation and Artificial Intelligence*. Seattle, WA.

Referred Presentations

Goldweber, M., Kaczmarczyk, L., Blumenthal, R., and Clear, A., (2020). A hands-on tutorial on how to incorporate computing for the social good in the introductory course sequence. *SIGCSE '20 Special Session*. Portland OR.

Blumenthal, R. and Blumenthal, J. E., (2019). *Intentionally educating for the social good in computer science*. Computing for the Social Good (CSG-Ed) Mini-Symposium, SIGCSE '19. Minneapolis, MN.

Symposiums/Affiliated Events

Blumenthal, J., Blumenthal, R., Goldweber, M., and Kaczmarczyk, L., (2021). Computing for the Social Good in Education Checkup: A Renewal on Why We Became Educators. Symposium Organizer. *Affiliated Event of the 52nd ACM Technical Symposium on Computer Science Education SIGCSE'21*. Toronto Canada.

Goldweber, M., Kaczmarczyk, L., and Blumenthal, R., (2020). Computing for the social good in computer science education. [Symposium organizers]. *Affiliated Even of the 51st ACM Technical Symposium on Computer Science Education SIGCSE'20*. Portland Oregon.

Unreferred Position (Opinion) Papers

- Blumenthal, R. (2021). Computing and society: A few false dichotomies. *ACM Computers and Society* 50(1), 27-28.
- Blumenthal, R. (2020). Descriptive and prescriptive software: A societal challenge. *ACM Computers and Society* 49(3), 28-30.
- Blumenthal, R. (2020). Is computing hiding behind a mask of software neutrality? *ACM Computers and Society* 49(2), 17-18.
- Blumenthal, R. (2020). When voting, trust computer scientists: Not Computers. *ACM Computers and Society* 49(1), 25.
- Blumenthal, R. (2019). Responsibility, What is appropriate? *ACM SIGCAS Computers and society*, 48 (3,4), 15.

Select Technical Reports

Blumenthal, R. & Laufmann, S. (1989). *Motivation-based default reasoning*. U S West Advanced Technologies, Technical Report. Boulder, CO.

Ensor, J.R., Gabbe, J., & Blumenthal, R. (1984). *Taxpert: A framework for exploring interactions among experts*. AT&T Bell Laboratories Technical Memorandum 11354-841029-04TM. Holmdel, NJ.

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Professional Service

Steering Committee, ACM Committee on Computer Science Curriculum, CS202X, 2021-Present

Member, ACM Committee on Professional Ethics (COPE), 2019-present

Executive Board, ACM Special Interest Group Computers and Society (SIGCAS) 2019-present

Chief Editor, Computers and Society, 2019-present.

Treasurer, IEEE-Computer Society Denver Section, 2018-2019.

Tutorial Chair, Rocky Mountain Conference on Artificial Intelligence, 1988.

Treasurer, Rocky Mountain Society for Artificial Intelligence, 1988-1990.

Regis University Service (select college and university levels)

Chair, Department of Computer Science, 2014-Present

Chair, Anderson College Rank and Promotion, 2020-Present

Chair, CCIS Committee on Rank, 2017-2019

Chair, CCIS Faculty Forum, 2017-2019

Chair, CPS Committee on Rank, 2013-2014.

Chair, Sponsored Projects Academic Research Council, 2006-2012

Member, Provost's Council, 2017-2019

Member, Sponsored Projects Academic Research Council, 2002-2005

Member, Internal Review Board, 2008-2014, 2020-present

Member, Faculty Development Committee, 2007-2008

Member, Higher Learning Commission Self Study, 2007 and 2017.

Reviewer, Student Scholarship and Research Symposium, 2003-2013.

Honors

Senior Member, Association of Computer Machinery (ACM)

Online and Classroom Course Development

Introduction to Artificial Intelligence, Quantum Computation, Computation Theory, Principles of Programming Languages, Software Engineering, Senior Capstone, Java Programming, Control Structures, Data Structures, Groupware and Workflow, Enterprise & Web Applications.

Teaching (Regis University: classroom & online)

Undergraduate: Introduction to Artificial Intelligence, Computation Theory, Control Structures, Data Structures, Principles of Programming Languages, Software Engineering, Java Programming, Software Engineering, Enterprise & Web Applications: J2EE, and Senior Capstone, Computational Foundations (CS0)

Graduate: Enterprise Software Engineering, Artificial Intelligence

Miscellaneous Community Service

K-8 Science Fair Judge, Westminster, 2019

Denver Science Fair judge, Denver, 2017

Elementary school classroom assistant 2012-2013

Elementary school Science Fair judge, Boulder Valley 1993-2010

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Elementary school visiting scientist, Boulder Valley 1994-2010

Youth basketball coach, 1996-1997, 2007-2009

Odyssey of the Mind coach, 1991-1998

Food bank volunteer, Habitat for Humanity volunteer, Special Olympics volunteer