Christine Liebe, Ph.D.

clynnliebe@gmail.com | Arvada, CO
Open to Remote & Hybrid positions
970-274-6688

Objective

Director / Professor
Provide leadership in a director or professor role related to Computer Science / STEM education & ethics, educational research, teacher education, educational graduate studies, and curriculum development. Support efforts to increase access to CS/STEM education and broadening participation in computing.

Qualifications

12+ years of progressive higher education leadership successes and relevant doctoral degree. Strategic thinker with productive tactical execution skills. Broad academic and administrative skills, with proven ability to develop and deliver curricula, advance educational research and faculty development initiatives. Results-focused, meeting organizational goals and objectives in compliance with university policies, procedures, rules, and regulations. Strong grant application and proposal writing skills, obtaining critical funding.

Education

WALDEN UNIVERSITY
Ph.D. Education: Curriculum, Instruction, Assessment, 4/2019
Dissertation title: An Examination of Abstraction in K-12 Computer Science Education
Committee: Narjis Hyder, Danielle Hedegard, Wade Smith (Chair)
M.S., Education: Literacy, 8/2008

MICHIGAN STATE UNIVERSITY | JAMES MADISON COLLEGE
B.S., Psychology & Urban Policy, 6/1989

Experience

COLORADO SCHOOL OF MINES, COMPUTER SCIENCE DEPT.
Research Associate | Adjunct Professor, 5/2019 to present
Developed, drafted, and submitted Computer Science education research proposals and publications garnering ~$1.3 million in funding. Initiated and managing K-12 outreach programs, teacher professional development, and undergraduate scholarship programs, engaging 328 teachers, 450 K-12 students, and 134 undergraduates. Coordinating and teaching introductory Python programming course (451 students, 5 instructors, 22 TAs). Developed and teaching of an online 8-week introductory Python programming course. Provided observational feedback and coaching for adjunct instructors. Developed (and teach) a 400-level CS education methods course for pre-service teachers and customized in-service teacher professional development. Coordinated industry partners, non-profit colleagues, and K-12 educators in community events and statewide conferences. Developed and delivered adjunct instructor and TA trainings including DIA&A.

Educational Evaluator, 5/2019 to present
Conducted CS Education research as an external and internal evaluator. Submitted IRB requests. Developed customized survey instruments. Conducted focus groups and interviews. Analyzed qualitative and quantitative data with standard tools (e.g., SPSS, NVivo, Python). Shared results in internal formative/summative reports and disseminated findings in conference publications with standard tools (e.g., LaTex).

COLORADO MOUNTAIN COLLEGE
Curriculum Coordinator | Special Needs Learning Coordinator, 7/2010 to 6/2015
Provided curriculum support for instructors teaching students with learning disabilities. Trained faculty, staff, and community members to begin offering accommodations rather than modifications for learning disabilities. Programmed courses, led and facilitated meetings, trained staff and faculty, approved syllabi, supervised student registration and orientation. Served on curriculum committees.

Experience – cont.

COLORADO MOUNTAIN COLLEGE
Adjunct Faculty, 3/2009 to 5/2019
Taught academic reading and writing courses. Developed and taught adult education theory and instruction courses required for all faculty members.

LOTUS EDUCATION INSTITUTE
CEO | Founder | Consultant, 6/2013 to present
Founded and designed a private occupational school offering a 500-hour Professional Massage Therapy Certification program, with classroom and online courses. Designed and maintain website and marketing efforts. Manage accounting, recruiting, enrollment, financial aid, and teacher training. Developed curriculum and 500 hours of online courses for other massage therapy schools. Teach massage therapy techniques, anatomy, physiology, pathology, business, and ethics. Licensed and bonded.

Publications and Presentations

Christine Liebe, Deborah Kariuki, and Eryn Rachael Kelsey Adkins. 2023. Survey Says: CS Majors are Interested in K-12 Teaching Careers. In Proceedings of the 54th ACM Technical Symposium on Computer Science Education V. 2 (SIGCSE 2023), March 15–18, 2023, Toronto, ON, Canada. ACM, New York, NY, USA, 1 page. https://doi.org/10.1145/3545947.3576346

Camp, T., Liebe, C., and Thiry, H. (2021). CS@Mines Successful S-STEM Scholarship Ecosystem for Low-Income and Underrepresented Students. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21), 3/13–20, 2021, Virtual Event, USA. ACM, New York, NY, USA, 7 pages. https://doi.org/10.1145/3408877.3432524

Waite, J., Liebe, C. (2021). Computer Science Student-Centered Instructional Continuum. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE)
'21), 3/13–20, 2021, Virtual Event, USA. ACM, New York, NY, USA, ACM ISBN 978-1-4503- 8062-1/21/03. DOI: https://doi.org/10.1145/3408877.3439591

Camp, T., Liebe, C., and Thiry, H., (2021). Colorado Strategic Approach to Rally Teachers. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21), 3/13–20, 2021, Virtual Event, USA. ACM, New York, NY, USA, ACM ISBN 978-1-4503- 8062-1/21/03. DOI: https://doi.org/10.1145/3408877.3439636

Camp, T., Liebe, C., and Slattery, M. (2020). Applying NCWIT Protocol to Broaden Participation in Computing: A Case Study of CS@Mines. In Proceedings of the 51st ACM Technical Symposium on Computer Science Education (SIGCSE '20). Association for Computing Machinery, New York, NY, USA, 528–534. DOI: https://doi.org/10.1145/3328778.3366958

Falkner, N., Vivian, R., Falkner, K., Ajanovski, V., Liebe, C., Morrison, A., & Parker, M. (2020). Meaningful Assessment at Scale: Helping Instructors to Assess Online Learning. In Annual Conference on Innovation and Technology in Computer Science Education, ITiCSE (pp. 512-513). online: ACM. https://doi.org/10.1145/3341525.3394993

Vivian, R., Quille, K., Mcgill, M., Falkner, K., Sentance, S., Barksdale, S., . . . Maiorana, F. (2020). An International Pilot Study of K-12 Teachers' Computer Science Self-Esteem. In Annual Conference on Innovation and Technology in Computer Science Education, ITiCSE (pp. 117- 123). online: ACM. https://doi.org/10.1145/3341525.3387418

Liebe, C., Camp, T. (2019). An Examination of Abstraction in K-12 Computer Science Education. In 19th Koli Calling International Conference on Computing Education Research (Koli Calling '19). Koli, Finland. ACM, New York, NY, USA, 9 pages https://doi.org/10.1145/3364510.3364526

Falkner, K., Sentence, S., Vivian, R., Barksdale, S., Busuttil, L., Cole, E., Liebe, C., Maiorana, F., McGill, M., Quille, K. (2019). An International Comparison of K-12 Computer Science Education Intended and Enacted Curricula. In Proceedings of Koli Calling '19: 19th Koli Calling International Conference on Computing Education Research (Koli Calling '19). ACM, New York, NY, USA, 10 pages https://doi.org/10.1145/1122445.1122456

Falkner,K .,Sentance,S ., Vivian,R ., Barksdale,S ., Busuttil,L ., Cole,E ., . . . Quille,K . (2019) An international benchmark study of K-12 computer science education in schools. In Annual Conference on Innovation and Technology in Computer Science Education, ITiCSE (pp. 257- 258). online: ACM. https://doi.org/10.1145/3304221.3325535

Liebe, C. (2017). Comparison of Abstraction in Computer Coding and in Critical Thinking. In P. Resta & S. Smith (Eds.), Proceedings of Society for Information Technology & Teacher Education International Conference 2017 (pp. 1394-1402). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).

Computer Science Teachers Association (CSTA) Conference
CS Student-Centered Instructional Continuum (CSSCIC), 7/2021
Instruction of Abstraction in K-12 Computer Science, 7/2017

Innovation in Education in Colorado (InnEdCO)
Computational Thinking and CS Instructional Strategies, 6/2019
GitHub Education for Teachers, 7/2021

RockCS – Colorado Computer Science Teachers Association
A CS Teacher's ToolKit, 6/2019
CS Student-Centered Instructional Continuum (CSSCIC), 6/2020
GitHub Education for Teachers, 6/2021

Colorado Teachers of English to Speakers of Other Languages (COTESOL) Adult ELL's and Critical Literacy Acquisition, 11/2011

International Asian TESOL Conference – Cebu, Philippines Adult ELL's and Critical Literacy Acquisition, 8/2011

National Accuplacer Conference – The College Board
Critical Literacy Acquisition and Accuplacer Success, 6/2011

Active Research Grants	Colorado Adult Educator and Professionals Association (CAEPA) ESL Students and Learning Disabilities, 10/2010
	IAM-RET: RET Site: Interdisciplinary Additive Manufacturing Research Experience for Teachers, NSF, RET Program, $599,000. Co-PI.
	CS@Mines Hidden Talents: Google ExploreCSR, $29,000. Co-PI.
Pending Research Grants	Atomically Precise Graphene Nanoribbon-based Transistors: Materials, Devices, Circuits, and Systems: FUSE: Future of Semiconductors (Pending). NSF, multi-institution grant, $100,000, Senior personnel.
	Teach@Mines Noyce Scholarship & Stipend Program: NSF - DUE, $1,200,000. Co-PI.

Professional Service / Activities

CS-IMPACT Network
National Researcher Network, 3/2019 to present
Invited to participate in monthly virtual meeting with national CS education researchers, NSF- funded.

ITiCSE 2019 Working Group
ITiCSE Conference, Aberdeen, Scotland, 7/2019
Invited to participate in a conference working group: An International Benchmark Study of K- 12 Computer Science Education in Schools.

NATIONAL SCIENCE FOUNDATION
Review Panelist, 1/2019 & 3/2020
Served as a reviewer with a national team and evaluated educational proposals.

AMERICAN EDUCATION ASSOCIATION
Conference Proposal Reviewer, 4/2019
Served as a reviewer evaluating educational publication submissions.

STARS Computing Corps.
Evaluation Assistant, 8/2014 to 8/2015
Provided data collection and analysis for computer science recruiting and teaching.

Professional Memberships

Association of Computing Machinery: Computer Science Education Special Interest Group

American Education Research Association

American Evaluator Association

Computer Science Teachers Association (Colorado Chapter Vice President)

Awards and Acknowledgements

Don E. Ackerman Fellowship, Walden University
A Fellowship in Educational Leadership supporting research that advances leadership in education through better understanding or practice.

Summit Award 2011, Colorado Mountain College
Special recognition for contributions towards developmental education.

Summit Award 2012, Colorado Mountain College
Special recognition for contributions towards developmental education.

Professional References

Tracy Camp, Ph.D., Director, Computing Research Association, tcamp@cra.org, 303.279.2998

Wendy Fisher, Ph.D., Assoc. Department Head, Computer Science, Colorado School of Mines, wfisher@mines.edu, 317.213.6767

Thomas Williams, Ph.D., Assoc. Professor, Computer Science, Colorado School of Mines, twilliams@mines.edu, 303.273.3820

Monica McGill, Ph.D., President & CEO, CSEdResearch.org, monica@csedresearch.org, 309.472.3301

Deborah Kariuki, MPS, MS CS, MEd., Director of Clinical Faculty – Computer Science Education, University of Maryland – Baltimore County, Dkariuki@umbc.edu, 410.455.1578