

HENRY M. HALFF
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OBJECTIVE

Bring research, design, development, and management skills to bear on projects that advance the use of information technology in training and education.

QUALIFICATIONS

Over 25 years of professional and technical experience in

- cognitive and instructional research;
- design, prototype, and development of intelligent computer-based training systems;
- management of major instructional technology R&D projects; and
- design, development and implementation of training programs for government and industry.

ACCOMPLISHMENTS

- Organized a team of specialists to design, develop, and test prototype software for automated design of interactive courseware; the prototype is usable by naïve developers, provides a 90% reduction in development effort, and produces demonstrably effective courseware.
- Planned and implemented major basic research programs on intelligent computer-based instruction and models of cognitive skills, resulting in rich vein of ongoing, highly productive R&D in these areas.
- Provided seminal support to early research on activation-driven, parallel distributed processing in human performance, giving rebirth to the immensely successful field of neural networks.
- Developed and used techniques for design of computer games for technical education, resulting in a prototype adventure game for Navy technical training that was equal or superior to conventional training methods.
- Developed telecommunication software for Apple II computer used in education program linking remote sites in Alaska and California, providing a means of cultural exchange and preservation for native Alaskans.

- Worked with a team of instructional experts to develop a classroom training program for project managers in a major telecommunications corporation, resulting in improved coordination among regions and better alignment of project management to corporate objectives.

EXPERIENCE

Halff Resources **1999–present**

San Antonio, Texas

- **Owner**—provides consulting, research, design, and development services in training, education, and instructional technology.

Mei Technology Corporation, Training Technology Division **1993–1999**

San Antonio, Texas

- **Project Manager**—managed projects involving novel instructional technology such as automated instructional design, project-based learning, and instructional games.
- **Branch Leader**—initiated efforts to improve coordination, efficiency and morale of research staff; made recommendations for hiring, compensation and termination.

Halff Resources, Inc. **1984–1993**

Arlington, Virginia

- **Chief Scientist**—provided design and consulting services on instructional technology projects. Designed and developed sales and management training programs for industry.
- **Vice President and Owner**—set up and maintained business functions of a successful independent consultancy.

Office of Naval Research, Psychological Sciences Division **1976–1984**

Arlington, Virginia

- **Scientific Officer**—Managed major basic research programs on intelligent computer-based instruction, models of cognitive skills, and biological intelligence.

University of Illinois, Department of Psychology **1970–1976**

Champaign, Illinois

- **Assistant Professor**—conducted research on learning, cognition, and decision making; taught graduate and undergraduate courses; implemented computer-based research lab.

EDUCATION

Ph. D. in Experimental Psychology, University of Texas, Austin, Texas

A. B. in Psychology, Stanford University, Stanford, California

Navy Long-Term Training, UCSD and Navy Personnel R&D Center, San Diego, California

USPHS Postdoctoral Fellow, University of Michigan, Ann Arbor, Michigan

AWARDS

Fellow of the American Psychological Society (1988)

Fellow of the American Psychological Association (1985-1988)

Sustained Superior Performance Award, Office of Naval Research (1983)

University Fellowship, University of Texas (1965-1968)

MEMBERSHIPS

American Psychological Society (Fellow)
American Educational Research Association
Association for the Advancement of Computers in Education
International Association for Artificial Intelligence in Education
Society of the Sigma Xi

COMMITTEES

ITS '98, 4th International Conference on Intelligent Tutoring Systems, Program Chair
Citizen's Advisory Committee for Academic Computing, Arlington County Schools
Navy Training Improvement Planning Committee, Office of Naval Research

PUBLICATIONS

Halff, H. M., Hsieh, P. Y., Wenzel, B. M., Chudanov, T. J., Dirnberger, M. T., Gibson, E. G., & Redfield, C. L. (2003). Requiem for a development system: Reflections on knowledge-based, generative instruction. In T. Murray, S. Blessing, & S. Ainsworth (eds.), *Authoring tools for advanced technology learning systems* (pp. 33–60). Amsterdam, The Netherlands: Kluwer Academic Publishers.

Wheeler, J. L., Miller, T. M., Halff, H. M., Fernandez, R., Halff, L. A., Gibson, E. G., & Meyer, T. N. (1999). Web Places: Project-Based Activities for At-Risk Youth. *Current Issues in Education* [On-line], 2 (6). Available at <http://cie.ed.asu.edu/volume2/number6/>.

Goettl, B. J., Halff, H. M., Redfield, C. L., & Shute, V. J. (Eds.) (1998). *Intelligent tutoring systems: 4th international conference, ITS '98* (Lecture Notes in Computer Science 1452). Berlin: Springer-Verlag.

Hsieh, P. Y., Halff, H. M. and Redfield, C. L. (1999). Four easy pieces: Development systems for knowledge-based generative instruction. [*International Journal of Artificial Intelligence in Education*, 10, 1–45.](#)

Wenzel, B. M., Dirnberger, M. T., Hsieh, P. Y., Chudanov, T. J., and Halff, H. M. (August, 1998). Evaluating subject matter experts' learning and use of an ITS authoring tool. In B. P. Goettl, H. M. Halff, C. L. Redfield, & V. J. Shute (Eds.) *Intelligent tutoring systems: 4th international conference, ITS '98* (Lecture Notes in Computer Science 1452). Berlin: Springer-Verlag.

Gibson, E. G., Halff, H. M., Hunthausen, J. M., & Muraida, D. J. (April, 1995). *Usability of the experimental advanced instructional design advisor (XAIDA)*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Halff, H. M. (November, 1994). Adventure games for technical education. *Proceedings of the 16th Interservice/Industry Training Systems and Education conference*. Orlando, FL: IITSEC.

- Halff, H. M. (1993). Supporting scenario- and simulation-based instruction. In J. M. Spector, M. C. Polson, and D. J. Muraida (Eds.) *Automating Instructional Design: Concepts and Issues* (pp. 231-248). Englewood Cliffs, NJ: Educational Technology Publications.
- Halff, H. M. (1993). Prospects for automating instructional design. In J. M. Spector, M. C. Polson, and D. J. Muraida (Eds.) *Automating Instructional Design: Concepts and Issues* (pp. 67-131). Englewood Cliffs, NJ: Educational Technology Publications.
- Halff, A.H., Halff, H.M., and Rodriguez, J.S. (1992). Calculation of runoff from rainfall using "NURP" data. *Proceedings, American Society of Civil Engineers, Water Forum '92, Irrigation and Drainage Conference*, Baltimore, MD, August, 1992.
- Halff, H.M. (1988). Curriculum and instruction in automated tutors. In M. Polson and J.J. Richardson (Eds.), *Foundations of intelligent tutoring systems*. Hillsdale, NJ: Erlbaum.
- Ramsey-Klee, D.M., Beck, D., and Halff, H.M. (1988). ABC: A computer-aided instructional software system. In *Proceedings of the Seventeenth Annual Meeting of the MUMPS User's Group*. College Park, MD: MUMPS User's Group.
- Halff, H.M. (1986). Instructional applications of artificial intelligence. *Educational Leadership*, **43**(6), 24-31.
- Halff, H.M., Hollan, J.D., and Hutchins, E.L. (1986). Cognitive science and military training. *American Psychologist*, **41**, 1331-1139.
- Halff, H.M. (1980). *Process analyses of learning and problem-solving*. In R. Snow, P.A. Federico, and W. Montague (Eds). *Aptitude, learning, and instruction: Cognitive process analysis*. Hillsdale, NJ: Erlbaum.
- Weigel, G.A., Schendel, J.D. and Halff, H.M. (1980). Cued recall for four-word categories presented in separate pairs. *Bulletin of the Psychonomic Society*, **15**, 362-364.
- Anderson, R.C., Goetz, E.R., Pichert, J.W., and Halff, H.M. (1977). Two faces of the conceptual peg hypothesis. *Journal of Experimental Psychology: Human Learning and Memory*, **3**, 142-149.
- Halff, H.M. (1977). The role of recall opportunities in learning to retrieve. *American Journal of Psychology*, **90**, 383-406.
- Halff, H.M. (1976). Precriterion stationary in Markovian learning models. *Psychometrika*, **41**, 301-320.
- Halff, H.M. (1976). Choice theories for differentially comparable alternatives. *Journal of Mathematical Psychology*, **14**, 244-246.