

**Curriculum Vitae
Eric Mathews**

**Memphis, TN
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Education

2002 – 2005 *The University of Memphis*
Master of Science in Psychology
1998 – 2002 *Rhodes College*
Bachelor of Science in Chemistry

Professional Experience

August 2006 – Present *Mercury Technology Labs*
Co-Founder
Lead the development of technology based business ventures by taking corporate and academic research technologies and commercializing them.

November 2005 – August 2006 *FedEx Institute of Technology*
Associate Director of Corporate Research and Development
Responsible for establishing and maintaining research partnerships with both for-profit and non-profit entities on behalf of the FedEx Institute of Technology, assisting in organizational development, and stewarding the vision of the FedEx Institute of Technology in consultation with The University of Memphis administration.

January 2004 – November 2005 *FedEx Institute of Technology*
Temporary Associate Director of Business Development
Responsible for establishing and maintaining research partnerships with both for-profit and non-profit entities on behalf of the FedEx Institute of Technology, assisting in organizational development, and stewarding the vision of the FedEx Institute of Technology in consultation with The University of Memphis administration.

October 2003 – August 2006 *Advanced Distributed Learning*
Founder & Co-Director, Workforce Co-Lab
Responsible for starting up and initial operations of this research institution, including planning, funding procurement, hiring, business development, and sustainability.

January 2003 – November 2005 *Institute for Intelligent Systems*
Associate Director

Responsible for enterprise vision and planning, establishing collaborative relationships with institutions both for-profit and non-profit, marketing and public relations, management and planning for various grants, liaising with the FedEx Institute of Technology and The University of Memphis administration, managing and protecting intellectual property, and organizational development.

May 2003 – May 2004 *CHI Systems*
Consultant

Consult on the planning and development of an electronic performance support and training system for the domain of Explosive Ordinance Disposal Procedures.

December 2003 – May 2004 *KAT*
Consultant

Consult on the planning and development of Question Asking and Answering System for Advanced Distributed Learning.

May 2000 – December 2002 *Institute for Intelligent Systems*
Research Assistant

Assist in the formation of a physics tutor, Why2K, handling various studies in linguistics, working with animated agents, and encoding knowledge to be used in a physics tutoring system. Contribute to various projects within the intelligent tutoring systems domain. Projects include designing a speech act classifier, abstracting architectures of dialog mechanisms, and consulting on the formation of a web-based knowledge construction system.

Fall 1999 - Spring 2000 *Tutoring Research Group*
Contractor under a National Science Foundation Grant

Conducted special projects related to the research done in the creation of an intelligent tutoring system, called AutoTutor. Tasks included analysis of evaluation study data and working on dialog management and dialog delivery.

Fall 1998 - Spring 2000 *Rhodes College,*
Psychology and Anthropology & Sociology Departments Professors' Assistant

Assisted in the day-to-day operation of the department, including clerical and computer projects.

Service and Other Experience

Spring 2001 – Spring 2002 *Rhodes College*
Honor Council

One of sixteen members elected by the student body to serve as a judge for honor council violations brought against fellow students.

Winter 2001 – Spring 2002 *Rhodes College*
President's Task Force on Undergraduate Research

One of eight members appointed by the President to design and implement a plan to engage students in research at Rhodes College.

Fall 2002 – Spring 2005

University of Memphis
Graduate Student Coordinating Committee

One of 10 members elected by the Psychology Graduate Students to facilitate programming and communication among the faculty and students of the psychology.

Fall 2002 – Spring 2004

Discourse Processes (Journal)
Ad Hoc Reviewer

Asked to periodically review articles from peers for publication in *Discourse Processes*, Art Graesser (Ed.).

September 2005 – Present

Lantana Projects
Board of Directors

Serve on the board of directors of the non-profit company, Lantana Projects. Chairman.

Honors & Recognition

Boy Scouts of America – Eagle Scout - Awarded April 16, 1997

Top 40 Under 40 – Memphis Business Journal – Recognized November 2006

Rhodes College – Presidential Scholarship

Phi Kappa Phi – Academic Honor Society – Inducted April 6, 2003

Award Winning Robot Design – American Association of Artificial Intelligence – 2005

Best Paper Presented – The Seventh World Multiconference on Systemics, Cybernetics, and Informatics Proceedings: Computing Techniques. Orlando, FL. – July 29, 2003

Invited Co-Chair – The Seventh World Multiconference on Systemics, Cybernetics, and Informatics Proceedings: Computing Techniques VI. Orlando, FL. – July 29, 2003

Publications

Hanson, D., Olney, A., Prilliman, S., Mathews, E., Zielke, M., Hammons, D., Fernandez, R., Stephanou, H. E. (2005). Upending the Uncanny Valley. Proceedings of the American Association of Artificial Intelligence 2005 (pp. 1728-1729). Palo Alto, CA: AAAI Press. (Award Winning Robot: First place for Interactivity)

Graesser, A. C., Jackson, G. T., Mathews, E. C., Mitchell, H. H., Olney, A., Ventura, M., Chipman, P., Franceschetti, D., Hu, X., Louwerse, M.M., Person, N.K., & TRG (2003). Why/AutoTutor: A test of learning gains from a physics tutor with natural language dialog. *Proceedings of the 25th Annual Conference of the Cognitive Science Society* (pp. 474-479). Mahwah, NJ: Erlbaum.

- Mathews, E. C., Jackson, G. T., Olney, A., Chipman, P. & Graesser, A. C. (2003). Achieving Domain Independence in AutoTutor. In N. Callaos, M. Margenstern, J. Zhang, O. Castillo, E. Doberkat (Eds.), *The Seventh World Multiconference on Systemics, Cybernetics, and Informatics Proceedings: Computer Science and Engineering I*, Vol. 5 (pp. 172-176). Orlando: IIS. (Award Winning Paper)
- Jackson, G. T., Mathews, E. C., Lin, D., Graesser, A. C. (2003). Modeling Student Performance to Enhance the Pedagogy of AutoTutor. In P. Brusilovsky, A. Corbett, and F. de Rosis (Eds.), *Lecture Notes in Artificial Intelligence: 2702* (pp. 368-372). New York: Springer.
- Olney, A., Louwerse, M., Mathews, E. C., Marineau, J., Hite-Mitchell, H., & Graesser, A. (2003). Utterance Classification in AutoTutor. In J. Burstein & C. Leacock (Eds.), *Building Educational Applications using Natural Language Processing: Proceedings of the Human Language Technology - North American Chapter of the Association for Computational Linguistics Conference 2003 Workshop, May 31*, (pp. 1-8). Philadelphia: Association for Computational Linguistics.
- Mathews, E. C., Jackson, G. T., Person, N. K., Graesser, A. C.. (2003). Discourse Patterns in Why/AutoTutor. *Proceedings of the 2003 AAAI Spring Symposia on Natural Language Generation in Spoken and Written Dialogue*. (pp.97-103). Palo Alto, CA: AAAI Press.
- Hu, X., Mathews, E. C., Graesser, A. C., Susarla, S. (2002). EBOOK.EXE: A Desktop Authoring Tool for HURAA. *Proceedings of the World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education*. Montreal, Canada: AACE Press.
- Person, N. K., Graesser, A. C., Bautista, L., Mathews, E. C., & the Tutoring Research Group (2001). Evaluating Student Learning Gains in Two Versions of AutoTutor. In J. D. Moore, C. L. Redfield, & W. L. Johnson (Eds.) *Artificial intelligence in education: AI-ED in the wired and wireless future* (pp. 286-293). Amsterdam: IOS Press.
- Person, N. K., Graesser, A. C., Harter, D., Mathews, E. C., & the Tutoring Research Group. (2000). Dialog move generation and conversation management in AutoTutor. *Proceedings of the AAAI Fall Symposium: Building Dialogue Systems for Tutorial Applications* (pp.45-51). Falmouth, MA: AAAI Press.
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Refereed Conference Presentations

- Mathews, E., Lancaster, W., Hu, X. & Susarla, S. (2005, October). ELearning Analytics in Industry. Presented at USDLA Fall Training 2005 Conference. Long Beach, CA.
- Hu, X., Mathews, E., & Graesser, A. C. (2004, August). ITS and SCORM. Presented at MERLOT International Conference. Cost Mesa, CA.
- Hu, X., Susarla, S., Graesser, A. C., & Mathews E. (2004, August). Lesson Planner - a Meta Authoring Tool Applied to AutoTutor. Presented at MERLOT International Conference. Cost Mesa, CA.
- Graesser, A. C., Jackson, G.T., Mathews, E. C., Mitchell, H. H., Olney, A., Ventura, M., Chipman, P., Franceschetti, D., Hu, X., Louwerse, M. M., Person, N. K., and the Tutoring Research Group. (July, 2003) Why/AutoTutor: A Test of Learning Gains from a Physics Tutor with Natural Language Dialog. Presented at the Twenty-fifth Annual Meeting of the Cognitive Science Society. Boston, MA.

- Hu, X., Mathews, E. C., Graesser, A. C., Susarla, S. (2002, October). EBOOK.EXE: A Desktop Authoring Tool for HURAA. Presented at the World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education. Montreal, Canada.
- Mathews, E. C., Jackson, G. T., Olney, A., Chipman, P. & Graesser, A. C. (July, 2003). Achieving Domain Independence in AutoTutor. Presented at *The Seventh World Multiconference on Systemics, Cybernetics, and Informatics Proceedings*. Orlando, FL.
- Jackson, G. T., Mathews, E. C., Lin, D., Graesser, A. C. (2003, June). Modeling Student Performance to Enhance the Pedagogy of AutoTutor. Presented at the 2003 Conference on User Modeling. Johnstown, PA.
- Olney, A., Louwse, M. M., Mathews, E. C., Marineau, J., Hite-Mitchell, H. (2003, June) Utterance Classification in AutoTutor. Presented at the Workshop on Building Educational Applications using Natural Language Processing at the Human Language Technology - North American Chapter of the Association for Computational Linguistics Conference. Edmonton, Canada.
- Mathews, E. C., Jackson, G. T., Person, N. K., Graesser, A. C. (March, 2003). Discourse Patterns in Why/AutoTutor. Presented at the 2003 AAAI Spring Symposia on Natural Language Generation in Spoken and Written Dialogue, Palo Alto, CA.
- Redfearn, R. D., Pendley, B. D., Lemme, D. P., Mathews, E. C., Roberts, J. K. (March, 2003). Pyrolysis GC-MS experimentation for the undergraduate analytical instrumentation laboratory. Presented at the 225th American Chemical Society National Meeting. New Orleans, LA.
- Mathews, E. C., Louwse, M. M., Person, N. K., & Graesser, A. C. (2003, January). Investigation of Conditional Language in Specific Applications and Domains. Presented at the Winter Conference on Discourse, Text, and Cognition. Jackson Hole, WY.
- Hu, X., Mathews, E. C., Graesser, A. C., Susarla, S. (2002, October). EBOOK.EXE: A Desktop Authoring Tool for HURAA. Presented at the World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education. Montreal, Canada.
- Mathews, E. C., Olney, A., Marineau, J., Mitchell, H. H., & Louwse, M. M (2002, June). Development of an Advanced Speech Act Classification System. Presented at the 12th Annual Meeting of the Society for Text and Discourse. Chicago, IL.
- Person, N. K., Graesser, A. C., Bautista, L., Mathews, E. C., & the Tutoring Research Group (2001, May). Evaluating Student Learning Gains in Two Versions of AutoTutor. Presented at the 10th International Conference of Artificial Intelligence in Education. San Antonio, TX.
- Person, N. K., Graesser, A. C., Jackson, G. T., Mathews, E. C., & the Tutoring Research Group (2001, January). Evaluating student learning outcomes for two versions of AutoTutor. Presented at the Winter Conference on Discourse, Text, and Cognition. Jackson Hole, WY.
- Person, N. K., Graesser, A. C., Harter, D., Mathews, E. C., & the Tutoring Research Group (2000, November). Managing the tutorial interaction in AutoTutor. Presented at AAAI Fall Symposium Series, Falmouth, Massachusetts.
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Invited Presentations

- Person, N. K. & Mathews, E. C. (October, 2003) Academic Research and Project Management. Invited talk to the Memphis Chapter of the Project Management Institute. Memphis, TN.
- Mathews, E. C., Jackson, G. T., Susarla, S. & Graesser, A. C. (April, 2003) AutoTutor: Intelligent Tutoring and Animated Conversational Agent. Invited talk to The Internet2 Community: Research & Education in Tennessee given at the Emerging Technologies for Higher Education Conference. Memphis, TN.
- Jackson, G. T. & Mathews, E. C. (March, 2003). Demo of Why/AutoTutor. Invited presentation for the 2003 AAAI Spring Symposia on Natural Language Generation. Palo Alto, CA.
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Technical Reports

- Haynes, B. C., Mathews, E. C., Jackson, G. T., Franceschetti, D., & Graesser, A. C. (2003) *Incorporating Dialog into a Physics Simulation Environment* (Technical Report 8-30-2003). Memphis, TN: Institute for Intelligent Systems.
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References

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More available upon request.
