Chutima Boonthum-Denecke
Professor, Tenured

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Research Interests: Artificial Intelligence, Natural Language Processing, Applied Natural Language Processing, Computational Linguistics, Information Retrieval (IR), Intelligence in Information Assurance and Cyber Security, Secure Coding and Secure Software Engineering, Cognitive Robotics (CR), Assessment Tool and Feedback Systems, Intelligent Tutoring System, Web-Development & Technology, and Educational Games.

Education

Old Dominion University	Computer Science	Ph.D.	May 2007
Illinois State University	Applied Computer Science	M.S.	May 2000
Srinakharinwirot University	Computer Science	B.S.	March 1997

Professional Experience / Appointments

2017-present: Professor, Computer Science Department, Hampton University.
2015-present: Director, Information Assurance and Cyber Security Center, Hampton University
2013-2016: Associate Professor, Computer Science Department, Hampton University.
2006-2013: Assistant Professor, Computer Science Department, Hampton University.
2006-2011: Research Visiting Scholar, Computer Science Dept., Old Dominion University.
2002-2006: Senior Research Assistant, Computer Science Dept., Old Dominion University.
2000-2002: Graduate Research Assistant, Computer Science Dept., Old Dominion University.
1998-2000: Teaching Assistant, Applied Computer Science Dept., Illinois State University.
1997-1998: Lecturer, Computer Science Division, Srinakharinwirot University, Thailand.

SUPPORT

External	Agency/Source	Amount	Period
Boonthum, C. (PI) **SURF-2007**	National Institute of Standards and Technology	$ 21,598	Summer 2007
Boonthum, C. (Co-PI), Zhu, W. (PI) **HP Tablet in CE/CSC classroom**	Hewlett Packard	$ 68,000	2007-2009
Boonthum, C. (PI) **ARTSI**	National Science Foundation	$ 125,667	2007-2010
Boonthum, C. (Co-PI), Muhammad, J. (PI) **STARS-AE**	National Science Foundation / The University of North Carolina, Charlotte	$ 61,668	2008-2011
Boonthum, C. (PI) **ARTSI-AE**	National Science Foundation	$ 892,288	2011-2013

External	Agency/Source	Amount	Period
Boonthum, C. (Co-PI), Muhammad, J. (PI) **STARS-Scaling Project**	National Science Foundation / The University of North Carolina, Charlotte	$ 103,085	2011-2016
Boonthum, C. (PI) **SURF-2012**	National Institute of Standards and Technology	$ 16,762	Summer 2012
Boonthum, C. (PI), Muhammad, J. (Co-PI) **CyberCorps SFS: HU GETS-IA** Hu, Y. (Previous PI), Banks, L. (Previous Co-PI)	National Science Foundation	$2.3M	2013-2017
Boonthum, C. (Co-PI), Muhammad, J. (PI) **HBCU-UP TIP** Simon, D. (Previous Co-PI)	National Science Foundation	$ 459,948	2013-2016
Boonthum, C. (STEM Advisor), Walker, I. (PD), other STEM advisors: Verma, A., Darby, W., Penn-Marshall, M., Horodysky, A., Sun, Z., & Gueye, P. **HU FITWP**	Department of Education	$3.5M	2014-2018
Boonthum, C. (PI) **SURF-2015**	National Institute of Standards and Technology	$ 8,898	Summer 2015
Boonthum, C. (PI), Muhammad, J., Penn-Marshall, M. (Co-PIs) **We-Prep-CS** (Scholarship) Benton, P. (Previous Co-PI)	National Science Foundation	$622,480	2015-2020
Boonthum, C. (PI), Daneshyari, M., Chittenden, C., Muhammad, J. (Co-PIs) **BAA-003-15: CAE-IAE: ISP-CCS** Nyagwencha, J. (Previous Co-PI)	National Security Agency	$187,020	2015-2016
Boonthum, C., Muhammad, J., w/ Affleck, A. **Lockheed Higher Ed Grant**	Lockheed Martin	$ 75,000	2015-2016
Boonthum, C. (Co-PI), Nare, O. (PI), Muhammad, J., Sheppard, E. (Co-PI) w/ Affleck, A. **VIL-MMP**	Verizon	$ 400,000	2016-2018
Boonthum, C., Muhammad, J., w/ Affleck, A. **Lockheed Higher Ed Grant**	Lockheed Martin	$ 45,000	2016-2017

External	Agency/Source	Amount	Period
Boonthum, C., Muhammad, J. **NSF SFS Renewal**	National Science Foundation	$4M total $1.4M for first 3 years	2018-2023
Muhammad, J., Boonthum, C., Walters-Williams, J., Chittenden, B. **HBCU-UP TIP: Integrating Artificial Intelligence in Computer Science Curriculum at Hampton University**	National Science Foundation	$ 399,868	2019 – 2020
Muhammad, J., Boonthum, C. **HBCU Computer Science Workshop**	National Science Foundation	$134,860	2019-2020
Muhammad, J., Boonthum, C. **HBCU Workshops on Building Capacity for Research in Computing and Data Science**	National Science Foundation	$87,770	2020-2021
Boonthum, C. Muhammad, J. **Integrating Artificial Intelligence in Cybersecurity Research Training Program at Hampton University**	Office of Naval Research	$249,910	2020-2021

PUBLICATIONS

Book and Proceedings (4)

McCathy, P.M. & **Boonthum**, C. (Eds.). (Book Editors: October 2011) *Applied Natural Language Processing and content analysis: Identification, Investigation, and Resolution*. IGI Global.

Boonthum-Denecke, C., McCarthy, P.M. & Lamkin, T.A. (Book Editors: Release December 2011; Copyright 2012). *Cross-Disciplinary Advances in Applied Natural Language Processing: Issues and Approaches*. IGI Global.

Boonthum-Denecke, C. & Youngblood, G.M. (Eds.). (2013) *Proceedings of the 26th Annual Florida Artificial Intelligence Research Society (FLAIRS) Conference*. Menlo Park, CA: The AAAI Press.

Eberle, W. & **Boonthum-Denecke, C.** (Eds.) (2014) *Proceedings of the 27th Annual Florida Artificial Intelligence Research Society (FLAIRS) Conference*. Menlo Park, CA: The AAAI Press.

Book Chapters (7)

Boonthum, C., Levinstein, I.B, & McNamara, D. S. (2006) Evaluating Self-Explanations in iSTART: Word Matching, Latent Semantic Analysis, and Topic Models. In A. Kao & S. Poteet (Eds.), *Text Mining and Natural Language Processing*, Springer. 91-106.

McNamara, D. S., **Boonthum**, C., Levinstein, I. B. & Millis, K. (2007). Evaluating Self-Explanations in iSTART: Comparing Word-based and LSA Systems. In T. Landauer, D. S. McNamara, S. Dennis, & W. Kintsch (Eds.), *LSA: A Road to Meaning*. Mahwah, NJ: Erlbaum. 227-241.

Boonthum, C., Wang, L., Olariu, S., and Zomaya, A. (2007). Wireless Networks: Opportunities for Infrastructure-related Optimization. *UNESCO-EOLSS* (Encyclopedia of Life Support Systems).

McNamara, D. S., O'Reilly, T., Rowe, M., **Boonthum**, C., & Levinstein, I. B. (2007). iSTART: A Web-Based Tutor that Teaches Self-Explanation and Metacognitive Reading Strategies. In D. S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies*. 397-420.

Boonthum, C., Levinstein, I.B., McNamara, D.S., Magliano, J.P., and Millis, K.K. (2008). NLP Techniques in Intelligence Tutoring Systems. In J. Rabunal, J. Dorado, & A. Pazos (Eds), *Encyclopedia of Artificial Intelligence*. Idea Group Publishing: PA. 1253-1258.

Renner, A., McCarthy, P., **Boonthum-Denecke**, C., & McNamara, D.S. (2011). Maximizing ANLP Evaluation: Harmonizing Flawed Input. In P. McCarthy & C. Boonthum-Denecke(Eds), *Applied Natural Language Process: Identification, Investigation, and Resolution*. 438-456. IGI Global.

Brunelle, J.F. & **Boonthum-Denecke**, C. (2012). Natural Language Processing Tools. In C. Boonthum-Denecke, P. McCarthy, & T. Lamkin (Eds): *Cross-Disciplinary Advances in Applied Natural Language Processing: Issues and Approaches*. 9-23. IGI Global.

Claville, M., Babu, S., **Boonthum-Denecke, C.**, Fowlks, E., Hill, E., Lowe, Cl., Parker B., Penn-Marshall, M., Ramdon, R., & Wallace, B. (2019). NanoHU: A Boundary-Spanning Education Model for Maximizing Human and Intellectual Capital. ACS Book.

Journals (8)

McNamara, D. S. Levinstein, I. B. & **Boonthum**, C. (2004). iSTART: Interactive Strategy Trainer for Active Reading and Thinking. Submitted to *Behavioral Research Methods, Instruments, and Computers*, 36 (2), 222-233.

Boonthum, C., Levinstein, I.B., Olariu, S., Pigli, E., Shurkova, E., and Zomaya, A.Y. (2007). Mobile computing: Opportunities for optimization research. *Computer Communications* 30 (4), 670-684.

Levinstein, I.B., **Boonthum**, C., Pillarisetti, S.P., and McNamara, D.S. (2007). iSTART 2: Improvements for Efficiency and Effectiveness. *Behavior Research Methods Instruments and Computers*, 39 (2), 224-232.

Gilliam, S., Magliano, J.P., Millis, K.K., Levinstein, I.B., and **Boonthum**, C. (2007). Assessing the format of the presentation of text in developing a Reading Strategy Assessment Tool (R-SAT). *Behavior Research Methods Instruments and Computers*, 39 (2), 199-204.

Magliano, J.P., Millis, K.K., The R-SAT Development Team, Levinstein, I.B., and **Boonthum**, C. (2011). Assessing Comprehension Strategies and Performance with the Reading Strategies Assessment Tool (R-SAT). *Metacognition and Learning, 6* (2), 131-154.

McNamara, D.S., Jackson, G.T., **Boonthum**, C., He, X. & Deng, Y. (2013). iSTART-ME: A Natural Language Game-Enhanced Comprehension Strategy Tutor. *Journal of South China Normal Universit y(Social Science Edition), 2,* 52-66. (Published in Chinese).

Jackson, T.J., Varner, L., **Boonthum-Denecke**, C., & McNamara, D.S. (2013). The Impact of Individual Differences on Learning with an Educational Game and a Traditional ITS. *International Journal of Learning Technology*, *8*(4), 315-336.

Jackson, T.J., **Boonthum-Denecke**, C., & McNamara, D.S. (2015). Natural Language Processing and Game-based Practice in iSTART. *Journal of Interactive Learning Research*, 26(20), 189-208.

Refereed Proceedings (33)

Levinstein, I. B., McNamara, D. S., **Boonthum**, C., Pillarisetti, S. P., & Yadavalli, K. (2003). Web-Based Intervention for Higher-Order Reading Skills. *Proceeding of the ED-MEDIA 2003 World Conference on Educational Multimedia, Hypermedia & Telecommunications*, 835-841.

Boonthum, C. (2004). iSTART: Paraphrase Recognition. *Proceedings of the Student Research Workshop: ACL 2004. 42nd Annual Meeting of the Association of Computational Linguistics,* Barcelona, Spain. 31-36.

Boonthum, C., Toida, S., & Levinstein, I. B. (2005). Sense Disambiguation for Preposition 'with'. *Proceedings of the Second ACL-SIGSEM Workshop on "The Linguistic Dimensions of Prepositions and their Use in Computational Linguistic Formalisms and Applications",* University of Essex – Colchester, United Kingdom. 153-162.

Boonthum, C., Toida, S., & Levinstein, I. B. (2006) Preposition Senses: Generalized Disambiguation Model. Proceedings of the seventh International Conference on Computational Linguistics and Intelligent Text Processing (CICLing-2006), Lecture Notes in Computer Science, Springer Verlag GmbH. 196-207.

Boonthum, C., Levinstein, I.B., Olariu, E., & Zomaya, A. Y. (2006) Algorithmic Issues in Mobile Infrastructure-Based Communications. *Proceedings of the IASTED International Conference on Networks and Communication Systems (NCS-2006)*, Chiang Mai, Thailand.

Boonthum, C., Levinstein, I.B., Olariu, S., Wang, L., & Xu, Q. (2006) Assurance-aware Self-organization of Sensor Networks. *Proceedings of the IASTED International Conference on Networks and Communication Systems (NCS-2006)*, Chiang Mai, Thailand.

Magliano, J.P, Gilliam, S., Millis, K.K, McNamara, D.S, Kurby, C, **Boonthum, C**. & Levinstein, I.B. (2008). Automating reading strategy training and assessment. *Proceedings of the 18th Annual Conference of the Society for Text and Discourse*, 2008, Memphis, TN.

Williams, A.B., Touretzky, D.S, Tira-Thompson, E.J., Manning, L., **Boonthum**, C., & Allen, C.S. (2008) Introducing an Experimental Cognitive Robotics Curriculum at Historically Black Colleges. *The ACM Special Interest Group on Computer Science Education (SIGCSE-2008), 498-502*.

Williams, A.B., Touretzky, D.S., Manning, L., Walker, J.J., **Boonthum**, C., Forbes, J., and Doswell, J.T. (2008) The ARTSI Alliance: Recruiting Underrepresented Students to Computer Science and Robotics to Improve Society. *The Association for the Advancement of Artificial Intelligence (AAAI-2008) Spring Symposia*.

Brunelle, J.F., Levinstein, I.B., & **Boonthum**, C. (2009). MiBoard: Metacognitive Training Through Gaming in iSTART. In C.M. Bank & K.L. Lawsure (Eds.) *Proceedings, VMASC Old Dominion University 2009 Student Capstone Conference*, VMAS Center, Suffolk, VA.

McNamara, D.S., **Boonthum**, C., Kurby, C.A., Magliano, J.P., Pillarisetti, S., & Bellissens, C. (2009). Interactive Paraphrase Training: The Development and Testing of an iSTART Module. In V. Dimitrova, R. Mizoguchi, B. du Boulay, & A.C. Graesser (Eds.), *Artificial intelligence in education; Building learning systems that care; From knowledge representation to affective modeling* (pp. 181-188). Amsterdam, The Netherlands: IOS Press.

Renner, A. M., McCarthy, P. M., **Boonthum**, C., & McNamara, D. S. (2009). Spelling mistacks and typeos: Can your ITS handle them? In P. Dessus, S. Trausan-Matu, P. van Rosmalen, & F. Wild (Eds.), *Proceedings of the Workshop on Natural Language Processing in Support of Learning; Metrics, Feedback, & Connectivity at the 14th International Conference on Artificial Intelligence in Education*(pp. 26-33). Brighton, UK: AIED.

Jackson, T.G., **Boonthum**, C., & McNamara, D.S. (2009). iSTART-ME: Situating extended learning within a game-based environment. In H.C. Lane, A. Ogan, & V. Shute (Eds.), *Proceedings of the Workshop on Intelligent Educational Games at the 14th Annual Conference on Artificial Intelligence in Education* (pp. 59-68). Brighton, UK: AIED.

Dempsey, K.B., Brunelle, J.F, Jackson, T.G., **Boonthum**, C., Levinstein, I.B., & McNamara, D.S. (2009). MiBoard: Multiplayer Interactive Board Game. In H.C. Lane, A. Ogan, & V. Shute (Eds.), *Proceedings of the Workshop on Intelligent Educational Games at the 14th Annual Conference on Artificial Intelligence in Education* (pp. 113-116). Brighton, UK: AIED.

Brunelle, J.B., Jackson, T.G., Dempsey, K.B., **Boonthum**, C., Levinstein, I.B., & McNamara, D.S. (2010). Game-based iSTART practice: From MiBoard to self-explanation showdown. In the *Proceedings of the 23rd International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 480-485. Menlo Park, CA: The AAAI Press.

Malladi, R. Levinstein, I.B., **Boonthum**, C., & Magliano, J. P. (2010). Summarization: Constructing an Ideal Summary and Evaluating a Student's Summary using LSA. In H.W. Guesgen & R.C. Murray, *Proceedings of the 23rd International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 295-296. Menlo Park, CA: The AAAI Press.

Mylavarapu, S., Levinstein, I.B., **Boonthum**, C., Magliano, J.P., & Millis, K.K. (2010). Enhancing Protocol Evaluation Through Semantic Modification of Benchmarks. In H.W. Guesgen & R.C. Murray, *Proceedings of the 23rd International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 297-298. Menlo Park, CA: The AAAI Press.

Jackson, G.T., **Boonthum**, C., & McNamara, D.S. (2010). The Efficacy of Extended Practice with iSTART: Low Ability Students Catch up. In V. Aleven, J. Kay, & J. Mostow, *Intelligent Tutoring Systems*, 10*th International Conference*. 349-351. Springer.

Boonthum-Denecke, C., McCarthy, P.M., Lamkin, T., Jackson, G.T., Magliano, J.P., & McNamara, D.S. (2011). Automatic Natural Language Processing and the Detection of Reading Skills and Reading Comprehension. In R. Charles Murray, Philip M. McCarthy (Eds.): *Proceeding of the 24th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 234-239. Menlo Park, CA: The AAAI.

Boonthum-Denecke, C., Touretzky, D., Jones, E., Humphries, T., & Caldwell, R. (2011). The ARTSI Alliance: Using Robotics and AI to Recruit African-Americans to Computer Science Research. In R. Charles Murray, Philip M. McCarthy (Eds.): *Proceeding of the 24th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 579-584. Menlo Park, CA: The AAAI.

Brhane, M. & **Boonthum-Denecke**, C. (2011). Using Latent Semantic Analysis and Word Matching Enhance Bridging Reading Strategy Identification. In R. Charles Murray, Philip M. McCarthy (Eds.): *Proceeding of the 24th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 341-342. Menlo Park, CA: The AAAI.

Burns, H. & **Boonthum-Denecke**, C. (2011) SnackBot: Vision and Perception with Video and Audio Captures using GStreamer. In R. Charles Murray, Philip M. McCarthy (Eds.): *Proceedings of the 24th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 597-598. Menlo Park, CA: The AAAI.

Jackson, G.T., **Boonthum-Denecke**, C., & McNamara, D.S. (2012). A Comparison of Gains between Educational Games and a Traditional ITS. In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 444-449. Menlo Park, CA: The AAAI.

Gregory, J., Howard, A., & **Boonthum-Denecke**, C. (2012). Wii Nunchuk Controlled Dance Pleo! Dance! to Assist Children with Cerebral Palsy by Play Therapy. In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 517-520. Menlo Park, CA: The AAAI.

Jobe, E., McLurkin, J., & **Boonthum-Denecke**, C. (2012). R-one Swarm Robot: Developing the Accelerometer and Gyroscope. In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 521-523. Menlo Park, CA: The AAAI.

Johnson, E., Olson, E., & **Boonthum-Denecke**, C. (2012). Robot Localization Using Overhead Camera and LEDs. In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 524-526. Menlo Park, CA: The AAAI.

Moon, D., Rybski, P., Swanier, C., & **Boonthum-Denecke**, C. (2012). Snackbot: The Process to Engage in Human-Robot Conversation. In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 527-529. Menlo Park, CA: The AAAI.

Burns, Hasai & **Boonthum-Denecke, C**. (2013). Exploring the Performance of the iRobot Create for Object Relocation in Outer Space. In Chutima Boonthum-Denecke, Michael Youngblood (Eds.): *Proceedings of the 26th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 580-583. Menlo Park, CA: The AAAI.

Boonthum-Denecke, C. & McCarthy, P. (Editors, 2013). FLAIRS Poster Abstracts. In Chutima Boonthum-Denecke, Michael Youngblood (Eds.): *Proceedings of the 26th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 650-660. Menlo Park, CA: The AAAI.

Eberle, W. & **Boonthum-Denecke, C.** (Editors, 2014). FLAIRS Poster Abstracts. In William Eberle, Chutima Boonthum-Denecke (Eds.): *Proceedings of the 27th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 519-527. Menlo Park, CA: The AAAI.

Scott, C., Wynne, D., & **Boonthum-Denecke, C.** (2016). Examining the Privacy of Login Credentials Using Web Based Single Sign-In: Are we Giving Up Security and Privacy for Convenience? Extended Abstract - Oral Presentation, *the 2016 Cybersecurity Symposium*, Coeur d'Alene, ID, April 18-20, 2016.

Wynne, D., Scott, C., & **Boonthum-Denecke, C.** (2016). Using Advanced Data Analytics to Detect Unknown Threats of Violent behavior through Social Networks. Extended Abstract - Poster Presentation, *the 2016 Cybersecurity Symposium*, Coeur d'Alene, ID, April 18-20, 2016.

Scott, C., Wynne, D., & **Boonthum-Denecke, C.** (2017). Examining the Privacy of Login Credentials Using Web Based Single Sign-In: Are we Giving Up Security and Privacy for Convenience? *Cybersecurity Symposium: Your Security, Your Future 2016: Edited Proceedings Volume*, IEEE.

Non-Refereed Proceedings (53)

Magliano, J.P., Millis, K.K., Levinstein, I.B., and **Boonthum**, C. (2005). Developing the Reading Strategy Assessment Tool (R-SAT). In *the Proceeding of Society for Computers in Psychology*, November 2005, Toronto, Canada.

McNamara, D.S., Levinstein, I.B., Sinclair, G., O'Reilly, T., Ozuru, Y., Best, R., Taylor, R., Rowe, M., **Boonthum**, C., and Pillarisetti, S. (2006). iSTART: An Automated Reading Strategy Tutor that helps students understand difficult texts. In *the Proceeding of Society for the Scientific Study of Reading*, July 2006, Vancouver, Canada.

Magliano, J.P., Millis, K.K., Levinstein, I.B., and **Boonthum**, C. (2006). Validating the Reading Strategy Assessment Tool (R-SAT). In *the Proceeding of Society for Text and Discourse*, July 2006, Minneapolis, MN.

Magliano, J.P., Millis, K.K., Gilliam, S., Levinstein, I.B., and **Boonthum**, C. (2006). Assessing Reading Comprehension with Verbal Protocols and Latent Semantic Analysis. In *the Proceeding of the 47th Annual Meeting of the Psychonomic Society*, November 2006, Houston, TX.

Gilliam, S., Magliano, J.P., Millis, K.K., Levinstein, I.B., and **Boonthum**, C. (2006). Assessing the format of the presentation of text in developing a Reading Strategy Assessment Tool (R-SAT). In *the Proceeding of Society for Computers in Psychology*, November 2006, Houston, TX.

Levinstein, I.B., **Boonthum**, C., Pillarisetti, S.P., and McNamara, D.S. (2006). iSTART 2: Improvements for Efficiency and Effectiveness. In *the Proceeding of Society for Computers in Psychology*, November 2006, Houston, TX.

Magliano, J.P., Millis, K.K., Gilliam, S., Levinstein, I.B., and **Boonthum**, C. (2007). Validating the Reading Strategy Assessment Tool (R-SAT). Invited for *Special Interest Group on "Comprehension of Text and Graphics"*, at *the 12th Biennial Conference for Research on Learning and Instruction*, August 2007, Budapest, Hungary.

Boonthum, C., Levinstein, I.B., Pillarisetti, S., & McNamara, D.S. (2007). Developing Computer Based Learning Environment. In *the Proceeding of Society of Computers in Psychology (SCiP-2007)*, November 2007, Long Beach, CA.

Magliano, J.P., Gilliam, S., Millis, K.K., McNamara, D.S., Kurby, C., **Boonthum**, C., & Levinstein, I.B. (2007). Automating Reading Strategy Training and Assessment. In *the Proceeding of Society for Computers in Psychology (SCiP-2007)*, November 2007, Long Beach, CA.

Zhu, W., **Boonthum**, C., Muhammad, A., & Willis, R. (2008). Wireless Tablet PC-Based Enhancement to Teaching and Learning in Engineering and Computer Science Courses. HP-Tablet PC 2008 conference.

Boonthum, C., Levinstein, I.B., & McNamara, D.S. (2008). The Evolution of iSTART Natural Language Feedback Algorithms. Poster at the *3rd Annual IES Research Conference*, Washington D.C., June 10-12, 2008.

Zhu, W., **Boonthum**, C., Muhammad, A., & Willis, R. (2009). Wireless Tablet PC-Based Enhancement to Teaching and Learning in Engineering and Computer Science Courses. Poster presentation, *ACM SIGCSE 2009*, Chattanooga, TN, March 4-8, 2009.

Boonthum, C. (2009). Robotics Introductory with NXT at Hampton University. In the proceeding of *ADMI 2009 – The Symposium on Computing at Minority Institutions*, Baltimore, MD, April 16-19, 2009.

Boonthum, C., Jackson, T.G., McNamara, D.S, & Levinstein, I.B. (2009). iSTART-ME: Enhanced learning through a game-based environment. *The Society of Computer in Psychology* (SCiP 2009), November 18, 2009, Boston, MA.

Renner, A., McCarthy, P.M., **Boonthum**, C., West, J.D., & McNamara, D.S. (2009). Automatic harmonizing of internal spelling errors to optimize assessment and feedback in intelligent tutoring systems. *The Society of Computer in Psychology* (SCiP 2009), November 18, 2009, Boston, MA.

Brunelle, J.F., Dempsey, K.B., Jackson, G.T., **Boonthum**, C. Levinstien, I.B., & McNamara, D.S. (2009). MiBoard: iSTART metacognitive training through gaming. *The Society of Computer in Psychology* (SCiP 2009), November 18, 2009, Boston, MA.

Renner, A., Jackson, G.T., **Boonthum**, C., & McNamara, D.S. (2009). Evaluating semantic assessments in computerized learning environments. *The Society of Computer in Psychology* (SCiP 2009) Poster Presentation, November 18, 2009, Boston, MA.

Boonthum, C., Magliano, J.P., McCarthy, P., Jackson, T.G., McNamara, D.S. (2010). Automatic Natural Language Processing and the Detection of Comprehension Processes. *The Society of Computer in Psychology* (SCiP 2010), November 18, 2010, St. Louis, MS.

Dempsey, K., Jackson, T.G., Brunelle, J.B., **Boonthum, C.**, McNamara, D.S. (2010). Pursuit of Balance: The Trade-off Between Engagement and Learning. *The Society of Computer in Psychology* (SCiP 2010), November 18, 2010, St. Louis, MS.

Boonthum-Denecke, C., Magliano, J.P., & McCarthy, P. (2011). Rethinking the automatic assessment of reading processes: Is it just a matter of doing more? Poster at *The Society of Computer in Psychology* (SCiP 2011), November 3, 2011, Seattle, WA.

Anderson, M., Touretzky, D.S., **Boonthum-Denecke**, C. (2012). ARTSI robotics roadshow-in-a-box: turnkey solution for providing robotics workshops to middle and high school students (Abstract Only). *ACM Technical Symposium on Computer Science Education* (SIGCSE 2012): 661.

Burns, H., Allen, S., & **Boonthum-Denecke**, C. (2012). Blackout: Guidance for Household Emergencies (Abstract Only). In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 571.

Stanton, W., Thompson, K., Moses, L., Jenkins, O.C., & **Boonthum-Denecke**, C. (2012). Swagbot : Audio and Visual Telepresence using ROS-Bridge, GStreamer and TokBox (Abstract Only). In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 573.

Williams, C., Howard, A., Swanier, C., & **Boonthum-Denecke**, C. 2012). No Child Left Behind (Abstract Only). In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 574.

Batts, C., Taylor, C.J., Jones, E., Caldwell, R., & **Boonthum-Denecke**, C. (2012). iRobot Create Navigation with Mapping Interpretation Explored Through Smart Camera Networks (Abstract only). In Philip M. McCarthy, Michael Youngblood (Eds.): *Proceedings of the 25th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 571.

McMillian, B., Toledo, A., & **Boonthum-Denecke, C**. (2013). Neptune: Aquatic Search and Rescue Robot. (Abstract Only) In Chutima Boonthum-Denecke, Michael Youngblood (Eds.): *Proceedings of the 26th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 654-655.

McMillian, B., Allen, J., Taylor, C.J., Manning, T.L., & **Boonthum-Denecke, C**. (2013). PR2 Teleoperation. (Abstract Only) In Chutima Boonthum-Denecke, Michael Youngblood (Eds.): *Proceedings of the 26th International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 654.

Allen, S., Burns, H., & **Boonthum-Denecke, C**. (2013). Blackout: Guidance for Household Emergencies. In the proceeding of *ADMI 2013 – The Symposium on Computing at Minority Institutions*, Virginia Beach, VA, April 11-13, 2013.

Young, J., & **Boonthum-Denecke, C.** (2015). Computer-Aided Psychoacoustic Oriented Therapy. In the proceeding of ADMI 2015 - *The Symposium on Computing at Minority Institutions*, Atlanta, GA, March 19-21, 2015.

Scott, C., Wynne, D., & **Boonthum-Denecke, C.** (2016). Pilot Study Web-Based Single Sign-On: Are We Giving Up Security and Privacy for Convenience? In the *Proceedings of ADMI 2016 - the Symposium on Computing at Minority Institutions*, Winston-Salem State, NC, March 31-April 3, 2016.

Strothers, B. & & **Boonthum-Denecke, C.** (2016). FaceRadar: Extending Open Source Software to Accelerate Image Processing in Digital Forensic Investigations through Face Detection. In the *Proceedings of ADMI 2016 - the Symposium on Computing at Minority Institutions*, Winston-Salem State, NC, March 31-April 3, 2016.

Carter, A. & **Boonthum-Denecke, C.** (2016). Protecting NASA's UAVs through Cyber Security Research. The 2016 Virginia Space Grant Consortium Student Research Conference (poster presentation), April 11, 2016, NASA Langley Research Center, Hampton, VA.

LaGreca, E. & **Boonthum-Denecke, C**. (2017). Survey on the Insecurity of the Internet of Things. In the *Proceedings of 2017 ADMI Symposium – The Internet of Things*, Virginia Beach, Virginia USA, March 23-26, 2017.

Ward, J. & **Boonthum-Denecke, C**. (2017). Survey on Steganography Techniques in Images. In the *Proceedings of 2017 ADMI Symposium – The Internet of Things*, Virginia Beach, Virginia USA, March 23-26, 2017.

Williams, M. & **Boonthum-Denecke, C**. (2017). Security and Digital Forensics in Cloud Computing: Overview. In the *Proceedings of 2017 ADMI Symposium – The Internet of Things*, Virginia Beach, Virginia USA, March 23-26, 2017.

Viswanathan, S. & **Boonthum-Denecke, C.** (2017). Sentiment Analysis – A Lexicon Based Approach for Microblogs. In the *Proceedings of 2017 ADMI Symposium – The Internet of Things*, Virginia Beach, Virginia USA, March 23-26, 2017.

Nelson, W. & **Boonthum-Denecke, C.** (2017). Secure Coding in Nanorobotics Applications. In the *Proceedings of 2017 ADMI Symposium – The Internet of Things*, Virginia Beach, Virginia USA, March 23-26, 2017.

Whitaker, A. & **Boonthum-Denecke, C.** (2018). Predicting Type of Irony Though Sentiment Analysis on Twitter Data. *Oral Presentation at ADMI-2018,* April 5-7, 2018, New Orleans, LA. (1st place, graduate student presentation).

Ward, J., Barnes, D., & **Boonthum-Denecke, C.** (2018). Examination of Steganography Techniques in Images. *Oral Presentation at ADMI-2018,* April 5-7, 2018, New Orleans, LA. (2nd place, graduate student presentation).

Nelson, W. & **Boonthum-Denecke, C.** (2018). SecureNano API: A Framework to Secure Nanobot Applications. *Oral Presentation at ADMI-2018,* April 5-7, 2018, New Orleans, LA. (1st place, undergraduate student presentation).

LaGreca, E. & **Boonthum-Denecke, C.** (2018). How a Blockchain Architecture Model Enhances the Security of the Internet of Things. *Oral Presentation at ADMI-2018,* April 5-7, 2018, New Orleans, LA.

Whitaker, A. & **Boonthum-Denecke, C.** (2018). Predicting Type of Irony Though Sentiment Analysis on Twitter Data. *Oral Presentation at School of Science Research Symposium, April 12, 2018*, Hampton University, Hampton, VA.

Ward, J., Barnes, D., & **Boonthum-Denecke, C.** (2018). Examination of Steganography Techniques in Images. *Oral Presentation at School of Science Research Symposium, April 12, 2018*, Hampton University, Hampton, VA.

Nelson, W. & **Boonthum-Denecke, C.** (2018). SecureNano API: A Framework to Secure Nanobot Applications. *Oral Presentation at School of Science Research Symposium, April 12, 2018*, Hampton University, Hampton, VA.

LaGreca, E. & **Boonthum-Denecke, C.** (2018). How a Blockchain Architecture Model Enhances the Security of the Internet of Things. *Oral Presentation at School of Science Research Symposium, April 12, 2018,* Hampton University, Hampton, VA.

Whitaker, A. & **Boonthum-Denecke, C.** (2019). Integrating Machine Learning into Irony Detection Model on Twitter Data. *Oral Presentation at ADMI-2019,* April 11-14, 2019, Memphis, TN. (2nd place, graduate student presentation).

Peterson, M. & **Boonthum-Denecke, C.** (2019). Investigation of Cookie Vulnerabilities. *Oral Presentation at ADMI-2019*, April 11-14, 2019, Memphis, TN.

Tucker, Z. & **Boonthum-Denecke, C.** (2019). Security, Privacy, and Ethical Concerns on Human Radio-Frequency Identification (RFID) Implants. *Oral Presentation at ADMI-2019*, April 11-14, 2019, Memphis, TN. (1st place, graduate student presentation).

Collins, I. & **Boonthum-Denecke, C.** (2021) Artificial Intelligence Assistants: Convenient vs. Security and Privacy. (Undergraduate Oral Presentation) The 2021 ADMI Symposium, March 26-27, 2021, Virtual.

Hammonds, O. & **Boonthum-Denecke, C.** (2021) Point-of-Sale Security and Privacy. (2021) (Graduate Oral Presentation) The 2021 ADMI Symposium, March 26-27, 2021, Virtual.

Hammonds, O. & **Boonthum-Denecke, C.** (2021) The Impacts of Phishing Email Attacks. (Graduate Oral Presentation, 1st place winner) The 2021 ADMI Symposium, March 26-27, 2021, Virtual.

Howard, K. & **Boonthum-Denecke, C.** (2021) The Importance of Web Browser Security and Privacy. (Undergraduate Oral Presentation, 3rd place winner) The 2021 ADMI Symposium, March 26-27, 2021, Virtual.

Magee, J. & **Boonthum-Denecke** (2021). Machine Learning in Network Analysis. (Graduate Oral Presentation, 2nd place winner) The 2021 ADMI Symposium, March 26-27, 2021, Virtual.

Student Poster Presentations - Advisor

Crenshaw, D., Santos, D., Reid, D., Minor, P., & Boonthum-Denecke, C. (2014). 3DP Autonomous Pet Feeding Robot. *Poster Presentation at ADMI-2014*, April 4-5, 2014. Virginia Beach, VA. (*First Place, Undergraduate Poster Presentation Award*).

Young, J., & Boonthum-Denecke, C. (2014). Psychoacoustics: How Does Sound Make Us Feel, and Why? *Poster Presentation at ADMI-2014*, April 4-5, 2014. Virginia Beach, VA.

Crenshaw, D., Santos, D., Reid, D., Minor, P., & Boonthum-Denecke, C. (2014). 3DP Autonomous Pet Feeding Robot. *Poster Presentation at the Hampton University, School of Science Research Day*, April 18, 2014. Hampton, VA.

Young, J., & Boonthum-Denecke, C. (2014). Psychoacoustics: How Does Sound Make Us Feel, and Why? *Poster Presentation at the Hampton University, School of Science Research Day*, April 18, 2014. Hampton, VA

Williams, M., Muhamad, J., Boonthum-Denecke, C. (2015). Cyber Security in the Military. *Poster Presentation at ADMI-2015*, March 19-21, 2015, Atlanta, GA.

Wynne, D., Muhamad, J., Boonthum-Denecke, C. (2015). The Increasing Risk of Using Electronic Medical Records. *Poster Presentation at ADMI-2015*, March 19-21, 2015, Atlanta, GA.

McLeod, A., Tucker, Z., Hough, J., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology in Aviation Industry. *Poster Presentation at ADMI-2016*, March 31-April 2, 2016, Winston-Salem, NC.

Brown, W., Nelson, W., Pearson, M., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology in marine Science. *Poster Presentation at ADMI-2016*, March 31-April 2, 2016, Winston-Salem, NC.

Gobern, N., Harmon, D., Neal, Q., Muhammad, J., & Boonthum-Denecke, C. (20016). The Impact of Technology in Military. *Poster Presentation at ADMI-2016*, March 31-April 2, 2016, Winston-Salem, NC.

Lane, K., Dupree, J., Hester, F., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology on the Music Industry Economy. *Poster Presentation at ADMI-2016*, March 31-April 2, 2016, Winston-Salem, NC.

Moore, Z., Chambers, A., Carter, A., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology on the Strategic Communications. *Poster Presentation at ADMI-2016*, March 31-April 2, 2016, Winston-Salem, NC.

Wynne, D., Scott, C., & Boonthum-Denecke, C. (2016). Using Advanced Data Analytics to Detect Unknown Threats of Violent Behavior through Social Networks. *Poster Presentation at ADMI-2016*, March 31-April 2, 2016, Winston-Salem, NC.

Moore, Z., Hu, V., & Boonthum-Denecke, C. (2016). Access Control Rule Logic Circuit Simulation: Immediate Fault Detecting System. *Poster Presentation at ADMI-2016*, March 31-April 2, 2016, Winston-Salem, NC.

McLeod, A., Tucker, Z., Hough, J., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology in Aviation Industry. *Poster Presentation at the 73rd Joint Meeting BKX and NIS for 2016*, April 6-9, 2016, Hampton, VA.

Brown, W., Nelson, W., Pearson, M., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology in marine Science. *Poster Presentation at the 73rd Joint Meeting BKX and NIS for 2016*, April 6-9, 2016, Hampton, VA.

Lane, K., Dupree, J., Hester, F., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology on the Music Industry Economy. *Poster Presentation at the 73rd Joint Meeting BKX and NIS for 2016*, April 6-9, 2016, Hampton, VA.

Moore, Z., Chambers, A., Carter, A., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology on the Strategic Communications. *Poster Presentation at the 73rd Joint Meeting BKX and NIS for 2016*, April 6-9, 2016, Hampton, VA.

Farrow, G. and Boonthum-Denecke, C. (2016). Nanotechnology within the United States Military. *Poster Presentation at the 73rd Joint Meeting BKX and NIS for 2016*, April 6-9, 2016, Hampton, VA.

Lowe, K. & Boonthum-Denecke, C. (2016). Nanobots in Medical Administration. *Poster Presentation at the 73rd Joint Meeting BKX and NIS for 2016*, April 6-9, 2016, Hampton, VA.

Howard, E., Boonthum-Denecke, C., & Daneshyari, M. (2016). Hive Mind/Swarm Intelligence and Robotics. *Poster Presentation at the 73rd Joint Meeting BKX and NIS for 2016*, April 6-9, 2016, Hampton, VA.

Wynne, D., Scott, C., & Boonthum-Denecke, C. (2016). Using Advanced Data Analytics to Detect Unknown Threats of Violent Behavior through Social Networks. *Poster Presentation at the 73rd Joint Meeting BKX and NIS for 2016*, April 6-9, 2016, Hampton, VA.

Carter, A. & Boonthum-Denecke, C. (2016). Protecting NASA's UAVs through Cyber Security Research. *Poster Presentation at the 2016 Virginia Space Grant Consortium Student Research Conference*, April 11, 2016, NASA Langley Research Center, Hampton, VA.

Wynne, D., Scott, C., & Boonthum-Denecke, C. (2016). Using Advanced Data Analytics to Detect Unknown Threats of Violent Behavior through Social Networks. *Poster Presentation at 2016 Cybersecurity Symposium*, April 18-20, 2016, Coeur d'Alene, ID.

Lane, K., Dupree, J., Hester, F., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology on the Music Industry Economy. *Poster Presentation at the 2016 STARS Celebration*, August 11-13, 2016, Atlanta, GA. won 2nd place poster.

Moore, Z., Chambers, A., Carter, A., Muhammad, J., & Boonthum-Denecke, C. (2016). The Impact of Technology on the Strategic Communications. *Poster Presentation at the 2016 STARS Celebration*, August 11-13, 2016, Atlanta, GA.

Coleman, S., Gray, G, Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Journalism. *Poster Presentation at ADMI-2017,* March 24-25, 2017 Virginia Beach, VA.

Douglas, K., Robinson, S., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Architecture. *Poster Presentation at ADMI-2017,* March 24-25, 2017 Virginia Beach, VA.

Elleby, Z., Peart, T., Russell, A., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Entertainment and Journalism. *Poster Presentation at ADMI-2017,* March 24-25, 2017 Virginia Beach, VA.

Green, K., Martin, R., Brathwaite, A., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Accounting. *Poster Presentation at ADMI-2017,* March 24-25, 2017 Virginia Beach, VA.

Magee, J., Jones, N., George, J., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Criminology. *Poster Presentation at ADMI-2017,* March 24-25, 2017 Virginia Beach, VA.

McAdoo, B., Lewis, C., Harvey, K., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Biology. *Poster Presentation at ADMI-2017,* March 24-25, 2017 Virginia Beach, VA.

Ray, A., Curry, T., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Advanced Aviation. *Poster Presentation at ADMI-2017*, March 24-25, 2017 Virginia Beach, VA.

Roberts, A., Thompson, T., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Biology Industry. *Poster Presentation at ADMI-2017*, March 24-25, 2017 Virginia Beach, VA. (2nd place, undergraduate poster presentation).

Coleman, S., Gray, G, Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Journalism. *Poster Presentation at School of Science Research Day Symposium*, April 11, 2017, Hampton University, Hampton, VA.

Douglas, K., Robinson, S., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Architecture. *Poster Presentation at School of Science Research Day Symposium*, April 11, 2017, Hampton University, Hampton, VA.

Elleby, Z., Peart, T., Russell, A., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Entertainment and Journalism. *Poster Presentation at School of Science Research Day Symposium*, April 11, 2017, Hampton University, Hampton, VA.

Green, K., Martin, R., Brathwaite, A., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Accounting. *Poster Presentation at School of Science Research Day Symposium*, April 11, 2017, Hampton University, Hampton, VA.

Magee, J., Jones, N., George, J., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Criminology. *Poster Presentation at School of Science Research Day Symposium*, April 11, 2017, Hampton University, Hampton, VA.

McAdoo, B., Lewis, C., Harvey, K., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Biology. *Poster Presentation at School of Science Research Day Symposium*, April 11, 2017, Hampton University, Hampton, VA.

Ray, A., Curry, T., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Advanced Aviation. *Poster Presentation at School of Science Research Day Symposium*, April 11, 2017, Hampton University, Hampton, VA.

Roberts, A., Thompson, T., Muhammad, J., & Boonthum-Denecke, C. (2017). The Impact of Technology in Biology Industry. *Poster Presentation at School of Science Research Day Symposium*, April 11, 2017, Hampton University, Hampton, VA.

Martin, R. & Boonthum-Denecke, C. (2021). Exploring Cloud Security in Cloud Services. (Graduate Poster Presentation) The 2021 ADMI Symposium, March 26-27, 2021, Virtual.

ORAL/POSTER PRESENTATIONS

2003, January. "Some comparisons of ODU Word-Based System to the LSA System"– *Memphis LSA Workshop on "Providing Self Explanation Feedback in iSTART: LSA and Beyond"*, University of Memphis, TN.

2003, January. "A description of the ODU Word-Based system" (with Danielle McNamara and Irwin Levinstein) *Memphis LSA Workshop on "Providing Self Explanation Feedback in iSTART: LSA and Beyond"*, University of Memphis, TN.

2004, May. "Evaluating Self-Explanations in iSTART: Comparing Word-based and LSA Systems" (with Danielle McNamara, Irwin Levinstein, and Keith Millis) *LSA Workshop for "LSA: A Road to Meaning"*, University of Colorado at Boulder, Colorado.

2004, July– "iSTART: Paraphrase Recognition" *ACL Student Research Workshop*, Barcelona, Spain.

2005, April. "Sense Disambiguation for Preposition 'with'" *ACL-SIGSEM Workshop on "The Linguistic Dimensions of Prepositions and their Use in Computation Linguistic Formalisms and Applications"*, University of Essex, Colchester, United Kingdom.

2006, March. "Assurance-Aware Self-Organization of Sensor Network" *Network and Communication System*, Chiang Mai, Thailand.

2007, July. "Natural Language Processing in iSTART feedback system" *IES Games Center*, Memphis, Tennessee.

2007, November. "Development Computer Based Learning Environments" *Society for Computers in Psychology (SCiP-2007)*, Long Beach, California.

2008, June. "The Evolution of iSTART Natural Language Feedback Algorithm", *IES Research Conference*, Washington, D.C.

2009, March. "Wireless Tablet PC-Based Enhancement to Teaching and Learning in Engineering and Computer Science Courses" *SIGCSE 2009*, Chattanooga, TN.

2009, April. "Robotics Introductory with NXT at Hampton University" *ADMI 2009*, Baltimore, MD.

2009, May, "Alternative Travel Funds for Faculty Professional Development" May 12, Faculty Summer Institute, Hampton University, Hampton, VA.

2009, May. "Interactive Paraphrase Training: The Development and Testing of an iSTART Module" *Virginia Academy of Science 2009*, Virginia Commonwealth University, Richmond, VA.

2009, June. "Robotics Outreach", *BPC/NCWIT K-12 Outreach Workshop*, Sheraton Crystal City, Arlington, VA.

2009, November, "iSTART-ME: Enhanced learning through a game-based environment" *Society for Computers in Psychology (SCiP-2009)*, Boston, MA.

2010, January, "Small World Phenomenon: Six Degrees of Separation", *the 5th Information Assurance Symposium*, Hampton University, Hampton, VA.

2011, February, "ARTSI: Advancing Robotics Technology for Societal Impact" CE21 PI and Community Meeting, Louisiana, MS.

2011, December, "ARTSI Success and Highlight" BPC Alliance Meeting, Arlington, VA.

2012, January, "ARTSI-AE: Advancing Robotics Technology for Societal Impact" CE21 PI and Community Meeting, Washington, DC.

2013, January, "ARTSI-AE: Advancing Robotics Technology for Societal Impact" CE21 PI and Community Meeting, Portland, OR.

2013, October, "Teaching Security Concepts to Non-Computer Science Majors" TRUST Autumn 2013 Conference, Washington, DC.

2015, February, "Computing Pre-College Program: Initial Impact to First-Year Student in Computer Science" HBCU-UP/CREST PI/PD meeting, Washington, DC.

2015, June, "Secure Coding and Security Injection" 2015 TRUST-WISE Workshop (Speaker/ Session Lead), UC Berkeley, CA.

2016, June, "Nanorobotics with Cublets," (Invited Speaker) NanoHU Pioneers, Hampton University, Hampton, VA.

HONORS/AWARDS:

Honor / Award	Institution/Organization	Year
Norma B. Harvey Character Award	Hampton University	2021
Exemplary Service Award – Graduate College	Hampton University	2016
Favorite Professor – Student Support Services	Hampton University	2013
Academic Excellence Award – School of Science	Hampton University	2012
Virginia Outstanding Faculty Award - Rising Star 2009 Nominee from Hampton University	State Council of Higher Education for Virginia	2009
ACL 2004, Travel Scholarship	Association for Computational Linguistics	July 2004

Honor / Award	Institution/Organization	Year
Outstanding Graduate Assistant	Computer Science Department, College of Sciences, Old Dominion University, Norfolk, VA 23529	2004
ACS Distinguished Graduate Student	Applied Computer Science Department, Illinois State University, Normal, IL 61790	2000

TEACHING EXPERIENCE:

SUBJECT *Undergraduate (U), Graduate (G)*	Institution
Introduction to Computers (U)	Srinakarinwirot University
Pascal Programming (U)	Srinakarinwirot University
COBOL Programming, text-based (U)	Srinakarinwirot University
C Programming, Lab (U)	Illinois State University
Visual C++ Programming, Lab (U)	Illinois State University
Computer Literacy (U)	Hampton University
COBOL Programming, window-based (U)	Hampton University
C++ & Unix Programming (U)	Hampton University
Web Development Technology: Java & XML (U)	Hampton University
Mobile Apps (Android, iOS) (U)	Hampton University
Introduction to Computer Forensics (U)	Hampton University
Artificial Intelligence (U, G)	Hampton University
Recently Taught (current / last 10 years)	
Java Programming, I (U)	Hampton University
Java Programming, II (U)	Hampton University
Web and Mobile Apps (U) – JSP & MySQL	Hampton University
Web and Mobile Apps (U) – Ionic & Firebase	Hampton University
Database Management (U)	Hampton University
Introduction to Robotics (U)	Hampton University
Artificial Intelligence – Robotics (U)	Hampton University
Artificial Intelligence (U, G)	Hampton University
Natural Language Processing (G)	Hampton University
Secure Software Engineering (G)	Hampton University
Incident Handling and Digital Forensics (G)	Hampton University
Introduction to NanoScience (U) [interdisciplinary course]	Hampton University
App Development with Swift (U)	Hampton University

UNIVERSITY SERVICES

University	Committee/Activity	Period
Hampton University	Departmental/School of Science Website Coordinator	2006
Hampton University	Undergraduate Curriculum Committee	2006-2007
Hampton University	Chair, Departmental Recruitment Committee	2006-2009
Hampton University	Member, School of Science Recruitment Committee	2006-2008
Hampton University	Member, School of Science Research Symposium Committee	2007-2010, 2011-2012

University	Committee/Activity	Period
Hampton University	Member, Black Family Conference Committee	2007-2008
Hampton University	Co-Chair, School of Science Recruitment Committee	2008-2009
Hampton University	Co-Faculty Advisor, ACM Student Chapter	2008-2011
Hampton University	Member, Hampton University Faculty Research Fund Committee	2009-2011
Hampton University	Faculty Advisor, Robotics Club	2009-
Hampton University	Faculty Advisor, Departmental Mentorship Program	2009-
Hampton University	Faculty Advisor, ACM Student Chapter	2011-
Hampton University	Member, Departmental ABET Accreditation Team	2012-2015,
	Team Lead, Departmental ABET Accreditation Team	2015-
Hampton University	Task Forces – Hampton University: The Next 20 Years :: Task Force 4 - Fundraising	2012-2015
Hampton University	Member, University-Wide Committee of Committee	2012-2015
Hampton University	Faculty Advisor, Upsilon Pi Epsilon (UPE) honor society	2014-2016
Hampton University	Member, NanoHU Internal Advisory Board	2013-
Hampton University	Task Forces – Hampton University: The Next 20 Years :: Facility Task Force	2015-
Hampton University	Big Data / Data Analytics Taskforce	2016-
Hampton University	Program Review Committee Member	2017-

PROFESSIONAL SERVICES

Institution/ Organization	Committee/Activity	Period
Applied Natural Language Processing, special track at *the International FLAIRS Conference*.	Program Committee, Reviewer	2007, 2008, 2009, 2010
Applied Natural Language Processing, special track at *the International FLAIRS Conference*.	Co-Chair	2010, 2016 - 2021
Robotics and Human-Computer Interaction, special track at *the International FLAIRS Conference*.	Co-Chair	2011, 2012
AI in Cyber Security, special track at *the International FLAIRS Conference*.	Co-Chair	2016
The International FLAIRS Conference.	Conference Program Co-Chair	2013, 2014
The International FLAIRS Conference.	Conference Chair	2015
ARTSI (Advancing Robotics Technology for Societal Impact) Student Research Conference	Chair, Conference Committee	2009-2013
BotBall Robotics Competition	Judge	2009, 2012
D. S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies*.	Ad-hoc Reviewer	November 2005
Encyclopedia of Artificial Intelligence, J. Rabunal, J. Dorado, & A. Pazos (Eds)	Ad-hoc Reviewer	Summer 2007
Frontiers in Education Conference (FIE)	Reviewer	2005-2006
International Conference of the Learning Sciences (ICLS)	Reviewer	2005
Journal of Information Technology Research (JITR)	Editorial Review Board	June 2007 – 2009
Mathematics & Science Academy program, Ocean Lakes High School	Research Mentor	Summer 2003
SIGCSE (ACM Special Interest Group in Computer	Reviewer	2007-2010

Institution/ Organization	Committee/Activity	Period
Science Education)		
STARS (Student and Technology in Acadia, Research, and Service) Celebration	Member, Organizing Committee Reviewer/Judge Chair, Student Poster Session	2008-2015
Virginia Academy of Science, Junior	Paper Reader and Judge	2007, 2008, 2009
ADMI (Association of Computer/Information Sciences and Engineering Departments at Minority Institutions) Symposium	Organizer, Student Poster Session	2014
ACM-W Chapter – Virtual Undergraduate Town Halls	Liaison	2015-
Women in Cybersecurity Conference (WiCyS)	Co-Chair, Student Poster Session	2016, 2017
RESPECT (Research on Equity and Sustained Participation in Engineering, Computing, and Technology) Conference	Program Committee	2016
NCWIT (National Center for Women & Information Technology) - Student Seed Fund (SSF)	Reviewer	2016
Journal of Medical Internet Research (JMIR)	Reviewer	2021

PAST AND CURRENT PROJECTS

ISP-CBCS: Intelligent Secured Programming and Cloud-based Computing System. The project is to (1) significantly expand intelligence and national security research capacity and teaching experience of the participating faculty members and students, (2) support the development of an innovative intelligence and national security program, and (3) prepare underrepresented minority students for the nation's workforce at a more competitive level. (NSA Award H98230-15-1-0286, PI: Chutima Boonthum-Denecke, Co-PIs: Moayed Daneshyari, Bruce Chittenden, and Jean Muhammad).

HU-FITWP: Hampton University First in the World Partnership. The Project goal for the Hampton University First in the World Partnership is to increase the access to and the affordability of a university education in the science, technology, engineering and mathematics disciplines (STEM) for underrepresented, underprepared, and/or low-income students by implementing innovative strategies and practices that can be effective in improving student enrollment and graduation rates. The target population includes students who have been accepted into HU for the fall 2014 semester (or subsequent years) and who have declared their majors as Biology, Chemistry, Computer Science/Computer Information System, Engineering, Marine and Environmental Science, Mathematics or Physics. Target population will consist of 250 students aged 18 to 22 in the first cohort with an annual increase of 3.75% to meet the Project goal (250 Y1; 288 Y2; 332 Y3; 382 Y4) totaling 1056 students served during the Project period. Project activities include: redesigning math courses; MATLAB and Excel training; Student-centric and Project-based learning; the creation of a Math Emporium, Summer Bridge Program and learning communities; near-peer mentoring and faculty Professional Development. Anticipated Project results include increase in college success/persistence for underrepresented, underprepared and/or low-income STEM students; increased earning potential for students, decreased societal costs and more STEM-qualified underrepresented graduates. (DoED Award P116F140000, PD: Ira Walker, STEM Advisors: Chutima Boonthum-Denecke, Shamina Aubuchon, Arun Verma, Paul Gueye, Andrij Horodysky, Willie Darby, and Zhao Sun).

We-Prep-CS: Workforce Preparation through Computing Scholarship Program. The Department of Computer Science at Hampton University (HU) in partnership with the HU Graduate College propose to demonstrate a creative, sustainable model for recruiting, engaging, retaining, and graduating historically underrepresented students in computing programs that can guide other institutions in efforts to diversify the STEM workforce. The project will also support two undergraduate-cohorts with a minimum of 10 undergraduate and three graduate-cohorts with a minimum of six graduate students. Each student will be awarded up-to $10,000 per year based on their financial need. (NSF Award DUE-1458729, PI: Chutima Boonthum-Denecke, Co-PIs: Jean Muhammad and Michelle Penn-Marshall).

CTCS4CS: Computational Thinking and Curriculum Reformation for Computer Science. The Department of Computer Science at Hampton University proposes to reform three gateway courses and implement an intensive computing summer bridge program in an effort to improve student academic performance and increase retention and graduation rates within the major. By integrating Computational Thinking into lower-level courses, the proposed project also seeks to strengthen Computer Science students and better prepare them to meet the modern demands in the field. Hampton University's Department of Computer Science already contributes significantly to the production of African Americans with Bachelor Degrees in Computer Science and Computer Information Systems. By increasing the success rate in these gateway courses, we are expecting to increase the graduation rates of students in the computing majors as a long-term outcome. (NSF Award Number# HRD-1332508, PI: Jean Muhammad, Co-PI: Chutima Boonthum-Denecke)

HU GETS-IA (Hampton University Graduate Education and Training Scholarship in Information Assurance). As part of a new CyberCorps: Scholarship for Service program, the Information Assurance Center at Hampton University through the Hampton University Graduate Education and Training Scholarships in Information Assurance (HU GETS-IA) program is supporting at least 19 students to earn Masters of Science degree in Information Assurance. This project enhances underrepresented minority and women students' understanding of Information Assurance to prepare them for the nation's workforce at a more competitive level; and significantly expands the department Information Assurance research capacity and teaching experience by offering a rigorous cybersecurity course curriculum coupled with mentorship and required professional development activities to the student population. A unique feature of this program is that students are serving as program ambassadors at high school recruiting events and are mentoring K-12 students in the Virginia Junior Academy of Science. Additionally, students are participating in the Hampton University annual Information Assurance Symposium and the annual Association of Computer/Information Sciences and Engineering Departments at Minority Institutions (ADMI) Symposium. HU works with its partners, Spelman College, Winston Salem State University, Elizabeth State University and other HBCU institutions, to recruit highly-qualified computing students with interest in cybersecurity into HU GETS-IA program. (NSF Award Number# DGE-1303409, PI: Chutima Boonthum-Denecke, Co-PI: Jean Muhammad, Previous-PI: Yen-Hung Hu; Renewal in 2018)

ARTSI: Advancing Robotics Technology for Social Impact. A community of predominantly African American robotics and computer science faculty will create the *ARTSI Alliance* to increase the participation of African Americans in robotics computing, through attractive, interdisciplinary collaborative robotics educational and research projects that aim at improve society in areas such as health, the arts, and entrepreneurship. The *ARTSI* (Advancing Robotics Technology for Societal Impact) *Alliance* includes faculty at **HBCUs** (Spelman, Florida A&M, University of the District of Columbia, Hampton, Morgan State, Norfolk State, Winston-Salem State, and University of Arkansas-Pine Bluff), **Research I (R1) Universities** (Carnegie Mellon, Georgia Tech, Brown, Duke, University of Alabama, University of Washington, and University of Pittsburgh), **Industry partners** (Seagate, iRobot, Microsoft Research, and Juxtopia), and **Educational Partners** (Florida-Georgia Louis Stokes Alliance for Minority Participation and Computer Science Teachers Association). (NSF Award Number# CNS-0742089, PI: Chutima Boonthum).

STARS: Student and Technology for Academia, Research, and Service. To Broaden participation in computing for traditionally under-represented student populations through STARS Leadership Corps (SLC), Pair Programming, Mentoring Model, Teaching Math to the Visually Impaired, Computing Education for Students with Learning Disabilities, Information Concerning Learning Disabilities Related Links, AARCS: African Americans in Research in Computer Science, Marketing and Dissemination. (NSF Award to Teresa Dalberg, UNC Charlotte. A subcontract to Hampton University, PI Jean Muhammad, Co-PI/Academic Liaison: Chutima Boonthum, Co-PI: Ira Walker).

HP "Wireless Tablet PC-Based Enhancement to Teaching and Learning in Engineering and Computer Science Courses" focuses on redesigning four freshman/sophomore level engineering and computer science courses. Based on the excellent platform offered by recent Tablet PCs and mobile technology, two PIs from two departments will collaborate on developing in-class tutorial, formative assessment, and mobile interaction within/across EGR/CSC classrooms. The benefits include: (i) students do not have to be in a Computer Lab to use computers, but rather the mobile lab will come to the classroom using wireless Tablet PC; (ii) the teaching of algorithmic thinking and programming will be strengthened significantly,

and students can practice interactively in a real software environment; (iii) students' freehand sketching and lettering skills will be trained interactively and efficiently, which will also be helpful for concept recognition; (iv) every student in the classroom will be able to answer in-class questions simultaneously and show his/her work to the class using the wireless projector; (v) using real time electronic assessments, instructors can identify students' needs and resolve difficulties that students may face in class before moving to an advanced topic; and (vi) lectures and in-class activities will be recorded and posted using Blackboard Virtual Classroom such that students missing classes can use these materials to catch up with their peers. PI. Weiying Zhu, Co-PI. Chutima Boonthum.

iSTART (Interactive Strategy Trainer on Active Reading and Thinking) is an automated strategy trainer designed to help students become better readers via multi-media technologies. Pedagogical agents provide students with interactive and adaptive training to use active reading strategies. iSTART is funded by the National Science Foundation, proposal on "*Promoting active reading strategies to improve students' understanding of science*" with University of Memphis (2000-2005, NSF Grant No: 0241144). Its continuation is funded by the Institute of Education Science (2004-2007, ED Grant No: R305G040046). PI: Danielle S. McNamara. ODU-subcontract PI: Irwin B. Levinstein.

R-SAT (Reading Strategy Assessment Tool) is an online assessment tool that will identify weaknesses in students' reading comprehension strategies. RSAT is funded by the Institute of Education Science, proposal on "*Assessing reading skill with verbal protocols and latent semantic analysis*" with Northern Illinois University (2004-2008, ED Grant No: R305G040055). PI: Joseph P. Magliano, Co-PI: Keith Millis. ODU-subcontract PI: Irwin Levinstein.

MASTER'S THESIS RESEARCH ADVISOR

The following are graduate students' Master's thesis, title, and year of graduation:

Date	Name	Thesis Title
August 2010	Lalitha Govindarajan	Using Latent Semantic Analysis and Word Matching to Semantically Identify Elaboration Reading Strategy
December 2010	Martha Brhane	Using Latent Semantic Analysis and Word Matching to Enhancing Bridging Reading Strategy Identification
August 2013	Philip Donald	An Iterative Cluster Correction Enhancement for the Bisecting K-Means Algorithm
December 2019	Anthon Whitaker	Irony Detection on Twitter Data Analysis and Machine Learning

Synergistic Activities

1. Service to the learning and scientific community: reviewer for International Conference of the Learning Sciences (ICLS), Frontiers in Education Conference (FIE), D.S. McNamara (Ed.) Reading Comprehension Strategies: Theories, Interventions, and Technologies. Co-Chair Special Tracks for FLAIRS. Poster Session Chair/Co-Chair for Women in Cybersecurity (WiCyS).
2. Undergraduate Advisor for CIS/CSC/CYS: meet with Computer Science undergraduate students discussing their curriculum, study plan, and assist them as needed and Faculty Advisor for Freshman Mentoring Program at Hampton, Computer Science Department.
3. Information Assurance and Cybersecurity Advisor: provide guidance for the CyberCorps Scholarship for Service students at Hampton University as well as supervise their research activities and progress to meet the NSF and OPM requirement for their internships and graduation.

Professional Affiliation:

- Association for Advancement of Artificial Intelligence
- Institute of Electrical and Electronic Engineers (IEEE), Computer Society
- Association of Computing Machinery: ACM, SIGCSE, SIGIR, SIGART
- Honor Society: Upsilon Pi Upsilon