

Rob LeGrand

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Academic positions

- 2015– Angelo State University, San Angelo, Texas. Associate Professor of Computer Science
- 2009–15 Angelo State University, San Angelo, Texas. Assistant Professor of Computer Science
- 2008–09 Bridgewater College, Bridgewater, Virginia. Assistant Professor of Mathematics and Computer Science

Education

- 2003–08 Ph.D., Computer Science, Washington University, St. Louis. Advisor: Ron K. Cytron. Dissertation: *Computational Aspects of Approval Voting and Declared-Strategy Voting*
- 1998–99 M.C.S., Computer Science, Texas A&M University, College Station. Advisor: Jianer Chen. Master's report: *An Anti-Forwarding Scheme for Signed Messages*
- 1994–98 B.S. *Magna cum laude*, Computer Science, Texas A&M University, College Station. Minor: Mathematics. 3.846 GPR

Research interests

Computational social choice, algorithmic game theory, artificial intelligence (multi-agent systems, machine learning), theory of computation, languages, compilers

Publications

- Michael McCarver and Rob LeGrand. Evolving a Hex-playing agent. *Crius: Undergraduate Research Journal*, Volume 4. Angelo State University, spring 2018.
- Simon Olsen and Rob LeGrand. Creating a poker-playing program using evolutionary computation. *Crius: Undergraduate Research Journal*, Volume 2.1, pages 61–70. Angelo State University, fall 2014.
- Timothy E. Roden, Rob LeGrand, Raul Fernandez, Jacqueline Brown, James (Ed) Deaton and Johnny Ross Jr. Development of a smart insole tracking system for physical therapy and athletics. In *Proceedings of the 7th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 2014)*. ACM Press, May 2014.
- Timothy E. Roden and Rob LeGrand. Experiences teaching a course in Android game development. In *Proceedings of the 9th International Conference on Foundations of Digital Games (FDG 2014)*. Society for the Advancement of the Science of Digital Games, April 2014.
- Timothy E. Roden and Rob LeGrand. Growing a computer science program with a focus on game development. In *Proceedings of the 44th ACM Technical Symposium on Computer Science Education (SIGCSE 2013)*, pages 555–560. ACM Press, March 2013.

Rob LeGrand, Timothy Roden and Ron K. Cytron. Nonmanipulable collective decision-making for games. In Ashok Kumar, Jim Etheredge and Aaron Boudreaux, editors, *Algorithmic and Architectural Gaming Design: Implementation and Development*, pages 67–81. IGI Global, Hershey, Pennsylvania, May 2012.

Rob LeGrand and Ron K. Cytron. Approval-rating systems that never reward insincerity. Presented at the 2nd International Workshop on Computational Social Choice (COMSOC 2008), Liverpool, England, September 2008.

Delvin Defoe, Rob LeGrand and Ron K. Cytron. On the connection between functional programming languages and real-time Java scoped memory. In *Proceedings of the 5th International Workshop on Java Technologies for Real-time and Embedded Systems (JTRES 2007)*, pages 73–82. ACM Press, September 2007.

Rob LeGrand, Evangelos Markakis and Aranyak Mehta. Some results on approximating the minimax solution in approval voting. In *Proceedings of the Sixth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2007)*, pages 1185–7. International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS), May 2007.

Delvin Defoe, Rob LeGrand and Ron K. Cytron. Cost analysis for real-time Java scoped-memory areas. *Journal of Systemics, Cybernetics and Informatics*, Volume 5, No. 4, pages 70–77. International Institute of Informatics and Systemics, 2007.

Rob LeGrand, Evangelos Markakis and Aranyak Mehta. Approval voting: Local search heuristics and approximation algorithms for the minimax solution. Presented at the 1st International Workshop on Computational Social Choice (COMSOC 2006), Amsterdam, Netherlands, December 2006.

Delvin Defoe, Rob LeGrand and Ron K. Cytron. Asymptotic analysis for real-time Java scoped-memory areas. In *Proceedings of the 4th International Conference on Computing, Communications and Control Technologies (CCCT 2006)*, Volume II, pages 131–138. International Institute of Informatics and Systemics, July 2006.

Tobias Mann, Morgan Deters, Rob LeGrand and Ron K. Cytron. Static determination of allocation rates to support real-time garbage collection. In *Proceedings of the 2005 ACM SIGPLAN/SIGBED Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES 2005)*, pages 193–202. ACM Press, June 2005.

Rob LeGrand. Analysis of the minimax procedure. Technical report (WUCSE-2004-67), Department of Computer Science and Engineering, Washington University, St. Louis, Missouri, November 2004.

Research grants

Rob LeGrand. *Finding Consensus Computationally without Encouraging Insincerity*. Research Enhancement Program grant, Angelo State University, summer 2013.

Rob LeGrand. *Limiting Manipulation in Collective Decision-Making*. Research Enhancement Program grant, Angelo State University, summer 2011.

Patents

Steven Bade, Rob LeGrand and Mark-David McLaughlin. System and method for providing positional authentication for client-server systems. U.S. Patent #6,898,628. Filed March 2001; awarded May 2005.

Steven Bade, Rob LeGrand and Mark-David McLaughlin. System and method for providing access to mobile devices based on positional data. U.S. Patent #6,778,837. Filed March 2001; awarded August 2004.

On editorial board Computer Game Development and Education: An International Journal (IJCGDE)

- Courses taught**
- 2009– Angelo State University
- CS 1315: Fundamentals of Programming (formerly CS 1341)
 - CS 1336: Computer Science I (formerly CS 1361)
 - CS 1337: Computer Science II (formerly CS 1362)
 - CS 1351: Java Programming
 - CS 3312: Web Programming
 - CS 3352: Theory of Algorithms
 - CS 3372: Handheld Game Development
 - CS 4316: Visual Programming
 - CS 4318: Artificial Intelligence
- 2008–09 Bridgewater College
- CIS 350: Database Management
 - CSCI 105: Basic Programming
 - CSCI 225: Mathematical Structures for Computer Science
 - CSCI 340: Computer Architecture
 - CSCI 440: Operating Systems and Networking
 - MATH 107: Quantitative Reasoning
- 2005 Washington University
- CSE 436S: Software Engineering Workshop
- Courses assisted**
- 2007–08 Washington University
- CSE 431S: Translation of Computer Languages (for Ron Cytron)
 - CSE 531S: Theory of Compiling and Language Translation (for Ron Cytron)
- 1998–99 Texas A&M University
- CPSC 433: Formal Languages and Automata (for Donald Friesen)
- Professional societies**
- Association for Computing Machinery
 - Heterodox Academy
- Honor societies**
- Phi Kappa Phi, inducted at Texas A&M, 1997
 - Upsilon Pi Epsilon, inducted at Texas A&M
 - Golden Key, inducted at Texas A&M