Anja Remshagen

Computer Science Program
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[Profile on UWG Website](#)

EDUCATION

1999 - 2001	Ph.D. in Computer Science
	University of Texas at Dallas
1994 -1998	M.S. in Mathematics
	Minor in Computer Science
	University of Cologne, Germany
1991 -1994	Certificate as Mathematical-Technical Assistant
	Bayer, Leverkusen, Germany

ACADEMIC EXPERIENCE

2015 -- present	Professor, Computer Science, University of West Georgia
2007 -- 2015	Associate Professor, Computer Science, University of West Georgia
2001 – 2007	Assistant Professor, Computer Science, University of West Georgia
1999 -- 2001	Research Assistant, Computer Science, University of Texas at Dallas
1996 -- 1998	Teaching Assistant, Computer Science, University of Cologne, Germany

INDUSTRY EXPERIENCE

1991 -- 1996	Mathematical-Technical Assistant (Industrial Programmer)
	Bayer, Leverkusen, Germany

RESEARCH INTERESTS

- Computer science education
- Combinatorics
- Automated reasoning, theorem proving

PUBLICATIONS

- D. Robinson and A. Remshagen. *Magic Venn Diagrams.* Recreational Mathematics Magazine (accepted, March 2025).
- A. Remshagen and K. Huett. *Reflections on Designing and Implementing a Hackathon for Teens to Foster Authentic Collaborative Participation in Computing*. TechTrends 67, 508-520, 2023.
- A. Remshagen. Counting Magic Venn Diagrams. Proceedings of the 50th Southeastern International Conference on Combinatorics, Graph Theory & Computing. Congressus Numerantium 234, 261-272, 2019.
- C. Rolka and A. Remshagen. *Showing Up is Half the Battle: Assessing Different Contextualized Learning Tools to Increase the Performance in Introductory Computer Science Courses*. International Journal for the Scholarship of Teaching and Learning*: Vol.*

9: No. 1, Article 10, 2015. http://digitalcommons.georgiasouthern.edu/ij-sotl/vol9/iss1/10.

- A. Remshagen. *Flipping a Data Structures and Discrete Mathematics Class*. Proceedings of the 2015 International Conference on Frontiers in Education: Computer Science and Computer Engineering, 2015.
- A. Remshagen and C. Rolka. *Contextualized Learning Tools: Animations and Robots*. Proceedings of the 51st ACM Southeast Conference, 2014.
- A. Remshagen and L. Yang. *Consistency Checking in Access Control*. Poster paper at the 4th ACM Conference on Data Application Security and Privacy, 2014.
- A. Remshagen. *A Real-World Project to Apply Discrete Structures.* Proceedings of the International Conference on Frontiers in Education: Computer Science & Computer Engineering (FECS 2013), 422-428, 2013.
- A. Remshagen. *Consistency Checking in Privacy-Aware Access Control*. Proceedings of the 51st ACM Southeast Conference, 2013.
- A. Remshagen. *Q-MIN UNSAT: An Optimization Problem for Quantified Boolean Formulas.* IADIS International Conference Intelligent Systems and Agents 2011, Rome, Italy, July, 2011.
- H. Kleine Büning and A. Remshagen. *An upper bound for the circuit complexity of existentially quantified Boolean formulas*. Theoretical Computer Science 411(31-33), 2864-2870, 2010.
- A. Remshagen. *The Complexity of Constrained Quantified Formulas*. IADIS International Conference Intelligent Systems and Agents 2010, Freiburg, Germany, 35–42, July, 2010
- A. Remshagen. *Making Discrete Mathematics Relevant*. Proceedings of the 48th ACM Southeast Conference, 2010.
- A. Remshagen and K. Truemper. *An Alternative Representation for QBF*. Proceedings of the 2009 International Conference on Artificial Intelligence (ICAI 2009), 531–535, July 2009.
- A. Remshagen and K. Truemper. *The Complexity of Futile Questioning*. Proceedings of the International Conference on Foundations in Computer Science, 132–138, 2007.
- B. Browning and A. Remshagen. *A SAT-Based Solver for Q-ALL SAT*. Proceedings of the 44th Annual ACM Southeast Conference, 30–33, 2006.
- A. Remshagen, L. Yang and S. Miller. *Widening the Pipeline for All Minority Students*. Birds-of-a-Feather Session at the Richard Tapia Celebration of Diversity in Computing, 25–26, 2005.
- N. Hristov and A. Remshagen. *Local Search for Quantified Boolean Formulas*. Proceedings of the 43rd Annual ACM Southeast Conference 1, 116–120, 2005.
- A. Remshagen and K. Truemper. *An Effective QBF Solver for the Futile Questioning Problem*. Journal of Automated Reasoning 34(1), 31–47, 2005
- A. Remshagen and K. Truemper. *Learning in a Compiler for MINSAT Algorithms*. Theory and Practice of Logic Programming 3(3), 271–286, 2003.
- C. Otwell, A. Remshagen, and K. Truemper. *An Effective QBF Solver for Planning Problem*. Proceedings of the 2004 International Conference on Artificial Intelligence, 311–316, 2004.

- V. Kaibel and A. Remshagen. *On the Graph-Density of Random 0/1-Polytopes*. (Proc. RANDOM03), Aurora, Jansen, Roli, and Sahai (eds.), LNCS 2764, Springer, 318–328, 2003
- A. Remshagen and K. Truemper. *Algorithms for Logic-Based Abduction*. SAT 2002, Quantified Boolean Formulas Mini Workshop, 2002.

CONFERENCE AND WORKSHOP PRESENTATIONS
- A. Remshagen. *A Preprocessor for a Magic Venn Diagram Solver.* 34th Midwestern Conference on Combinatorics and Combinatorial Computing, 2022.
- K. Huett and A. Remshagen, A. *Coding for the community: Promising practices for designing and implementing hackathons for teens*. Association for Educational Communications and Technology (AECT) International Convention, Online and in Chicago, Illinois, 2021.
- A. Remshagen, K. Gray, and T. Lee. *A Scratch Hackathon for Teens*. Proceedings of the 2018 International Conference on Frontiers in Education: Computer Science and Computer Engineering, 2018.
- A. Remshagen, K. Gray, and T. Lee. *Scratch Animation for Teen Hackathon*. Poster presentation at the Grace Hopper Celebration, 2018.
- U. Bubeck, H. Kleine Büning, A. Remshagen, and X. Zhao. *Expressiveness and Complexity of Subclasses of Quantified Boolean Formulas*. Workshop on Propositional Proof Complexity, Federated Logic Conference (FLoC) 2010, Edinburgh, UK, 2010.
- J. Allen, A. Remshagen, and L. Yang. *Can Virtual Worlds bring a 'Second Life' to CS Education?* Birds-of-a-Feather Session at the Richard Tapia Celebration of Diversity in Computing, 19–20, 2009.
- K. Moreland, A. Remshagen, and K. Riehl. *An Intelligent System for Medical Diagnosis*. Grace Hopper Celebration of Women in Computing, 2006.

TECHNICAL REPORTS
- A. Remshagen. *On the Complexity of the CQF Hierarchy*. 2007.
- A. Remshagen and K. Truemper. *A Solver for the Quantified Formula Problem Q-ALL SAT*. 2005.
- G. Felici, A. Remshagen, and K. Truemper. *The Futile Questioning Problem*. IASI Research Report n. 591, Italy, Rome, Luglio 2003.

EXTERNAL FUNDING
- UWG Hackathon: Coding for a Better Community—a youth hackathon for teens age 13-17; conducted annually 2017-2025, except for 2021; sponsored by GreenCourt ($1500 annually)

INTERNAL FUNDING
- "3D Printing Award Development" ($2250) Perry College Experiential Learning Project, Fall 2025
- "Educational Games with HoloLens 2" Student Research Assistant Program Award ($1550), collaboration with Sungwoong Lee, FY 2023-2024

- "Educational Games with HoloLens 2" Student Research Assistant Program Award ($1720), collaboration with Sungwoong Lee, FY 2022-2023
- "An Augmented Reality Application for the UWG History Project" Student Research Assistant Program Award ($3096), collaboration with Keri Adams, FY 2022-2023
- "Prototyping an Augmented Reality Application for the UWG History Project" Student Research Assistant Program Award ($1344), FY 2021-2022
- "Hackathon 2019: Coding for a Better Community" Student Research Assistant Program Award ($1450), FY 2018-2019
- "UWG Hackathon 2018" Student Research Assistant Program Award ($1650), FY 2017-2018
- "Carroll County Computes" Student Research Assistant Program Award ($1475), FY 2016-2017
- "Videos to invert the CS3151 classroom" UWise minigrant II program ($2500), FY 2013-2014
- "Automated Reasoning to Manage an Access Control System" Grant by the UWise Student Research Program ($6500), Spring 2013
- "Introduction to Computer Science with Robotics" Renewal of the UWise Minigrant from 2012/2013 ($6,896), collaboration with Christine Rolka, FY 2012-2013
- "Road To Computing (Reach out and Excite Students and Parents about Computing)" Student Research Assistant Program Award ($2000), collaboration with Christine Rolka and Li Yang, FY 2011-2012
- "Introduction to Computer Science with Robotics" UWise Minigrant ($4,884), collaboration with Christine Rolka, FY 2011-2012
- "Constrained Quantified Formulas" Learning Resources Committee Faculty Research Grant ($750), FY 2009-2010
- "Virtual Worlds" Retention, Progression, and Graduation Initiative ($1400), collaboration with Li Yang, Spring 2008
- "Tackling a New Complexity Level in Artificial Intelligence" Sponsored Operations Faculty Research Enhancement Award ($2400), FY 2004-2005
- "Narrowing the Gender Gap in CS" Learning Resources Committee Faculty Research Grant ($1500), collaboration with Li Yang, FY 2004-2005

PROFESSIONAL MEMBERSHIPS
- Member of the Association for Computing Machinery
- Member of the Upsilon Pi Epsilon (Computer Science Honor Society)
- Member of the Computer Science Teacher Association

UNIVERSITY SERVICE
- Service as member of various committees, memberships include

- o Faculty Senate
- o Rules Committee (member & chair)
- o Faculty Senate Executive Committee
- o Graduate Procedures Committee
- o Member of the Presidential Committee on Institutional Policy
- o COSM Advisory Committee
- o CS/COMP Undergraduate Curriculum Committee (member & chair)
- o CS Undergraduate Curriculum Committee
- o CS Graduate Curriculum Committee
- Program coordinator of the computer science/computing undergraduate programs, Fall 2023 – Spring 2025
- Advisor of CSWoW (Computer Science Women of West Georgia), a student organization and initiative to increase the number of female computer science students, 2007 – 2018

COMMUNITY SERVICE

Since Spring 2019	Served as a member of the Career, Technical and Agricultural Education Advisory Board of Carrollton High School.
Since 2017	Organized the annual hackathon "Coding for a Better Community" for teenagers age 13-17 in the local community
Fall 2016	Served as coach for the First Lego League team at the Carrollton Middle School
Spring 2014 – Spring 2016	Co-organized and conducted outreach sessions at uCode@UWG teaching children in the age range 7-17 years HTML/CSS, Snap programming with Finch robots, and programming Minecraft in Java.

HONORS

- Outstanding Graduate Teacher of the Year 2015/2016, 2018/2019, and 2021/2022 awarded by vote of the Computer Science undergraduate students at the University of West Georgia
- Outstanding Undergraduate Teacher of the Year 2007/2008 and 2010/2011 awarded by vote of the Computer Science undergraduate students at the University of West Georgia
- 2003 Upsilon Pi Epsilon Computer Science Honor Society Inductee