Christabel Wayllace

+1 (575) 312 1148
cwayllac@nmsu.edu

Education

2017–2021 **Ph.D.**, *Computer Science and Engineering, Washington University in St. Louis*
Dissertation Title: Stochastic Goal Recognition Design.

2016–2017 **Ph.D. student**, *Computer Science*, New Mexico State University
Transferred to Washington University in St. Louis.

2013–2015 **M.S.**, *Computer Science*, New Mexico State University
Thesis: Goal Recognition Design with Stochastic Agent Action Outcomes.
GPA:3.85

2007–2007 **Diploma in Higher Education Teaching**, *C.E.P.I.D.E.S.*, Universidad Mayor de San Andrés

1994–1999 **B.S.E.**, *Electronics Engineering*, Universidad Mayor de San Andrés

Research Interests

- Artificial Intelligence; Human-AI Interaction; Decision Making with Humans in the Loop; Goal Recognition; Planning Under Uncertainty; Explainable Planning; Intelligent Tutoring Systems.

Professional Experience

08/2023–Present **Assistant Professor**, *New Mexico State University*, Department of Computer Science

Research Experience

2021–2023 **Postdoctoral Fellow**, *University of Alberta*
- Reinforcement Learning with Humans in the Loop
- Intelligent Tutoring Systems

2017–2021 **Graduate Research Assistant**, *Washington University in St. Louis*
- Stochastic Goal Recognition Design
- DCOP algorithms in Edge Computing

2016–2017 **Graduate Research Assistant**, *New Mexico State University*
- Stochastic Goal Recognition Design

Teaching and Mentoring Experience

01/2024–Present **CS 475/505: Artificial Intelligence I**, *New Mexico State University*

08/2023–12/2023 **CS 479: Introduction to Intelligent Agents Using Science Fiction**, *New Mexico State University*

2022 **Co-Supervisor High School Students**, *University of Alberta*, WISEST Summer Research and High School Internship (HIP) Program

This six-week research programs offer grade 8 to 12 students hands-on experiences, access to role models and mentors, and the chance to see how they can be successful in STEM education and careers that are underrepresented for their gender.

2019 **Mentor High School Students**, *Washington University in St. Louis*, Summer Project

Prepared and taught a two-week class about searching algorithms in Java to students of grades 8 to 12.

2018–2020 **Co-Supervisor Undergraduate Students**, *Washington University in St. Louis*, Independent Study

Students investigated algorithms and applications in goal recognition and goal recognition design.

James Hu (Spring 2018 – Spring 2020) ▪ Xi Yang (Summer 2018) ▪ Tony Li (Spring 2019) ▪ Yuchen Han (Summer 2019 – Spring 2020) ▪ Siam Abd Al-Ilah (Fall 2019) ▪ Lexie Sun (Fall 2019).

2014–2017 **Teaching Assistant**, *New Mexico State University* , Graduate and Undergraduate

Graded homework and conducted laboratory classes.

Data Structures and Algorithms, Introduction to Robotics, Discrete Mathematics, Introduction to Computer Science, and Computer Science I.

2016–2017 **Graduate Assistant**, *New Mexico State University* , Young Women in Computing

Helped middle and high school students in the Summer Camps to understand Computing Science concepts as well as to use programming languages such as Scratch, App Inventor, Arduino, EV3, and java.

2010 **High School Teacher**, *Colesol Saint Germain*, Extracurricular Course

Taught Physics and Math using robots to grade 12 students.

2006–2008 **Instructor**, *Universidad Nur*, Oracle DBA Certification Training

Taught Oracle Data Base SQL Fundamentals and Oracle Data Base Administration 1 and 2.

Industry Experience

2000–2011 **Technical Support and Web Development**, *Various Bolivian Companies*

Experience in Bolivian companies. Main responsibilities included network design and implementation, systems evaluation to optimize the use of the computational equipment, user training, and solving user's technical problems. Web development using PHP, PostgreSQL, MySQL, JavaScript, HTML, and CSS.

Honors and Awards

2023 **CRA-WP Career Mentoring Workshop Scholarship**, *Computer Research Association Widening Participation*

2022 **Transition to Career Postdoctoral Training Program**, *University of Alberta*

2013 **NMSU-Alumni Out-of-State Scholarship**, *New Mexico State University*

2003 **Outstanding Student Award**, *CISCO Networking Academy*

1998 **Guido Capra Gemio Best Student Award**, *Universidad Mayor de San Andrés*

Publications

Dissertation

[1] **Wayllace, Christabel**. *Stochastic Goal Recognition Design*. Ph.D. Dissertation, Dept. of Computer Science and Engineering, Washington University in St Louis, St. Louis, Missouri, 2021.

Conference and Workshop Papers

[2] T. Yang, S. Das, **Wayllace, Christabel**, and M. E. Taylor. Work in progress: Using symbolic planning with deep rl to improve learning. In *NeurIPS 2023 Workshop on Generalization in Planning (GenPlan 2023)*. NeurIPS, 2023. Acceptance Rate:60/85=71%.

[3] C. Muslimani, S. Gul, C. Demmans Epp, M. E. Taylor, and **Wayllace, Christabel**. C^2Tutor: Helping people learn to avoid present bias during decision making. In *Proceedings of the International Conference on Artifical Intelligence in Education (AIED)*, 2023. Acceptance Rate: 21.11%.

[4] M. Guevarra, S. Das, **Wayllace, Christabel**, C. D. Epp, M. E. Taylor, and A. Tay. Augmenting flight training with AI to efficiently train pilots (Demonstration Track). In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, 2023. Acceptance Rate:Unknown.

[5] **Wayllace, Christabel** and W. Yeoh. Stochastic goal recognition design problems with suboptimal agents. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 9953–9961, 2022. Acceptance Rate:1349/9251=15%.

[6] **Wayllace, Christabel**, S. Keren, A. Gal, E. Karpas, W. Yeoh, and S. Zilberstein. Accounting for observer's partial observability in stochastic goal recognition design. In *Proceedings of the European Conference on Artificial Intelligence (ECAI)*, pages 2394–2400, 2020. Acceptance Rate:365/1363=27%.

[7] **Wayllace, Christabel**, S. Ha, Y. Han, J. Hu, S. Monadjemi, W. Yeoh, and A. Ottley. Dragon-v: Detection and recognition of airplane goals with navigational visualization (Demonstration Track). In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, pages 13642–13642, 2020. Acceptance Rate:Unknown.

[8] A. Paulos, S. Dasgupta, J. Beal, Y. Mo, K. Hoang, L. J. Bryan, P. Pal, R. Schantz, J. Schewe, R. Sitaraman, A. Wald, **Wayllace, Christabel**, and W. Yeoh. A framework for self-adaptive dispersal of computing services. In *2019 IEEE 4th International Workshops on Foundations and Applications of Self* Systems (FAS* W)*, pages 98–103. IEEE, 2019. Acceptance Rate:Unknown.

[9] K. D. Hoang, **Wayllace, Christabel**, W. Yeoh, J. Beal, S. Dasgupta, Y. Mo, A. Paulos, and J. Schewe. New distributed constraint reasoning algorithms for load balancing in edge computing. In *Proceedings of the International Conference on Principles and Practice of Multi-Agent Systems (PRIMA)*, pages 69–86, 2019. Acceptance Rate:29/112=26%.

[10] K. D. Hoang, **Wayllace, Christabel**, and W. Yeoh. Algorithms for load balancing in edge computing: A feasibility study. In *10th International Workshop on Optimization in Multiagent Systems (OptMAS)*, 2019. Acceptance Rate:29/112=26%.

[11] **Wayllace, Christabel**, S. Keren, A. Gal, E. Karpas, and W. Yeoh. Accounting for partial observability in stochastic goal recognition design: Messing with the marauder's map. In *Proceedings of the Workshop on Heuristics and Search for Domain-independent Planning*, pages 33–41, 2018. Acceptance Rate:Unknown.

[12] **Wayllace, Christabel**, P. Ho, and W. Yeoh. New metrics and algorithms for stochastic goal recognition design problems. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 4455–4462, 2017. Acceptance Rate:660/2540=26%.

[13] **Wayllace, Christabel**, P. Hou, W. Yeoh, and T. C. Son. Goal recognition design with stochastic agent action outcomes. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 3279–3285, 2016. Acceptance Rate:573/2294=25%.

Journal Articles

[14] C. Orge Retzlaff, S. Das, **Wayllace, Christabel**, P. Mousavi, A. Saranti, A. Angerschmid, M. Afshari, T. Yang, M. E. Taylor, and A. Holzinger. Human-in-the-loop reinforcement learning: A survey of requirements, challenges, and opportunities. In *Journal of Artificial Intelligence Research (JAIR)*, volume 79, pages 359–415, 2024.

Talks and Workshops

Technical

2024 **Harnessing AI Agents for Positive Behavior Change**, *Psychology Friday Forum*, Invited Talk.
Weekly departmental research talk in the Department of Psychology at NMSU.

2022 **How AI Agents can Positively Influence Other's Behavior**, *ML@DevFest Edmonton*, Invited Talk.
DevFests are local tech conferences hosted by Google Developer Groups (GDG) around the world.

2022 **Symbolic Plan and Goal Recognition**, *University of Alberta*
Invited Lecture at the Experimental Mobile Robotics Class.

2021 **Stochastic Goal Recognition Design**, *University of Alberta*, Invited Talk
Mathew E. Taylor's group meeting.

2020 **Stochastic Goal Recognition Design**, *University of Massachusetts Amherst*, Invited Talk
Shlomo Zilberstein's group meeting.

2020 **Game Playing in AI**, *Washington University in St Louis*, Workshop
WeBelong! CS@WashU is a women-focused workshop about computing organized at the Washington University in St Louis.

Outreach

2024 **Explore Reinforcement Learning: An AI Approach Focusing on Learning Decision-Making from Experience**, *2024 Noyce Summit*, Workshop to train STEM teachers.
The NSF Robert Noyce Teacher Scholarship Program seeks to prepare and retain a skilled and compassionate STEM teacher workforce for high-need schools.

2024 **Reinforcement Learning and the Role of Mistakes in Teaching and Learning**, *CSTA Paso del Norte*, Invited Talk.
The Computer Science Teachers Association (CSTA) is an organization run by teachers, for teachers.

2022 **Exploring the Baby Steps to the Colorful World of Research**, *CAN-CWIC*, Workshop
CAN-CWiC is the premiere Canadian computing conference for Women in Technology. This annual event features networking, learning, sharing and mentoring.

2019 **Introduction to AI**, *Parkway North High School*, Workshop
CS day at Parkway North High School on November 25th and 26th. Held 14 sessions with 7 - 10 students per session and one session of 16 students.

Professional Activities and Service

Program Committees

2024 **ECAI**, *European Conference on Artificial Intelligence*

2024 **EDM**, *Educational Data Mining*

2024 **CHI**, *Conference on Human Factors in Computing Systems*

2023 **NeurIPS: Workshop GAIED**, *NeurIPS'23 Workshop: Generative AI for Education*

2023–2024 **AIED**, *International Conference on Artifical Intelligence in Education*, Posters and Late Breaking Results Program

2023–2024 **IJCAI**, *International Joint Conference on Artificial Intelligence*

2023–2024 **AAMAS**, *International Conference on Autonomous Agents and Multiagent Systems*

2022–2023 **ICAPS**, *International Conference on Automated Planning and Scheduling*

2020–2024 **AAAI**, *Association for the Advancement of Artificial Intelligence*

2021–2022 **AAAI**, *Association for the Advancement of Artificial Intelligence* , Special Programs and Tracks

Reviewer Manuscripts

2022-2023 **IEEE**, *Transactions on Games*

2023 **Springer Nature**, *Applied Intelligence*, The International Journal of Research on Intelligent Systems for Real Life Complex Problems

Outreach and Volunteering Work

2022 **ICAPS**, *Chaired session User Interfaces in Explainable Planning*

2022–2023 **YWCA-Bolivia**, *Organized and co-led an English Conversation Club*

2009, 2020 **We Belong CS@WashU**, *Helped with the organization and coordination*

2022-2023 **YWCA-Bolivia**, *Lead the Nominating Committee sessions*