

Curriculum Vita

Daniel Pauw

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College of Information Studies
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EDUCATION

University of Maryland, College Park, MD – Ph.D. Information Studies – Defended May 2023
University of Wisconsin, Madison, WI – MS Cell & Molecular Biology 3.47 GPA – August 2012
Gonzaga University, Spokane, WA – BS Biology 3.45 GPA – May 2007
Gonzaga University, Spokane, WA – Robert D. Prusch Biology Department Service Award 2007
School for Field Studies, Center for Rainforest Studies, Queensland Australia – Research in
rainforest restoration and ecology – January-April 2006

EXPERIENCE

Graduate Assistant/Researcher for API Can Code project, University of Maryland - College Park Information Studies

Summer 2022, Summer 2023: The NSF funded API Can Code project studies how to help high school aged youth see how they interact with data in their everyday lives. It then looks to design course plans using participatory design to help youth to learn data science skills as part of their high school curriculum. PI: Dr. David Weintrop.

Instructor of Record for INST 650 and 326

Fall 2022 - Spring 2023: Responsibilities include preparing lectures, lecturing grading, supporting class discussion, directing TA and grader, and assisting students with questions outside of class.

Teaching Assistant for INST 362, 630, 631, 466, 201, and 311 University of Maryland - College Park Information Studies

September 2018 - Spring 2022: Responsibilities include grading, supporting class discussion, point of contact to guide students with their group research projects, and leading class lecture and discussion for select topics. TA'ed for INST 362, 630, 631, 466, 201, and 311. Lead section classes for INST 362 during Spring 2021.

Graduate Assistant for Science Everywhere project, University of Maryland - College Park Information Studies

September 2013 - 2021: The NSF funded Science Everywhere project studies how to connect young learners in life-relevant learning settings using the Science Everywhere app and large screen display. My dissertation is connected to this study and is specifically exploring how children use digital stickers in social media to share scientific learning interests in informal settings. PI: Dr. Tamara Clegg.

Graduate Assistant for NatureNet project, University of Maryland - College Park Information Studies

September 2013 - August 2018: The NSF funded NatureNet project researches how to help communities share and learn about local watersheds and other natural resources using a combination of technology and asset based community development. This project involves working with community partners such as the Anacostia Watershed Society and other associated professionals to teach and share about the local ecology. PIs: Dr. Tamara Clegg and Dr. Jennifer Preece.

Library Volunteer, Gonzaga University Foley Library

August 2012 - April 2013: Processing analytics data for Foley Library website with the goal of refining design to better serve the student population. Foley Library, supervised by John Spencer, Reference Coordinator.

Adjunct Instructor, Gonzaga University Biology Department

January 2013 - April 2013 Instructor for 4 sections of laboratory instruction for BIOL105L, Information Flow in Biological Sciences Lab. Assisting students in creating research projects where they seek to discover and isolating novel phage infecting *Mycobacterium smegmatis* from local sources as part of a larger HHMI funded project. The projects contributed to a larger HHMI funded project. Department of Biology, Dr. Mia Bertagnolli, Chair.

Phage Lab, Gonzaga University Biology Department

September 2012 -December 2012 Assisted in laboratory instruction for BIOL105L, Information Flow in Biological Sciences Lab. Assisting students in discovering and isolating novel phage infecting *Mycobacterium smegmatis* from local sources as part of a larger HHMI funded project. Department of Biology, Dr. Mia Bertagnolli, Chair.

Graduate Student, University of Wisconsin - Madison Cell & Molecular Biology

August 2010 -July 2012: Courses leading to MS in cell and molecular biology including Prokaryotic Molecular Biology, Cellular Signal Transduction Mechanisms, Advanced Microbial Genetics, Protein & Enzyme Structure & Function, Modeling for Biochem Systems, Cell Mechanisms-Protein Biogenesis and Trafficking, and Regenerative Medicine Ethics. I also worked in a research lab (Dr. Douglas Weibel) contributing information analysis leading to authorship on two publications.

Research Assistant II, Oregon Health & Science University

August 2009 -May 2010: Preparing DNA and protein preps to design and use plasmids encoding HIV capsid in the study of capsid structure and HIV maturation. Additionally, I helped to optimize a compound screen for high throughput usage as well as testing potential inhibitors of Flaviviruses. Department of Molecular Microbiology and Immunology, Dr. Eric Barklis, PI.

Chemistry Lab Volunteer, Oregon Museum of Science and Industry

September 2009 -May 2010: Helping visitors to the Oregon Museum of Science and Industry take part in hands-on experiments as well as doing demonstrations in the Turbine Hall.

Rising Stars Mentor, Oregon Museum of Science and Industry

July 2009 -August 2009: Mentored in the second session of the Rising Stars program. Responsibilities included ensuring Rising Stars have fun learning science while completing the required coursework and demonstrations.

Research Assistant II, Oregon Health & Science University

August 2007 -August 2009: Maintained transfected cell lines in tissue culture as well as conduct siRNA transfections, immunoprecipitations, immunoblots, and prepare figures for presentation and publication. The lab primarily worked to elucidate function of specific proteins in the Fanconi anemia DNA repair pathway. Molecular and Medical Genetics, Dr. Robb Moses, PI.

Undergraduate Research Assistant, Gonzaga University

May -August 2005: Applied genetic approaches to the study of aneuploidy in *Saccharomyces cerevisiae*. Dr. Kirk Anders, research supervisor.

Chemistry & Biology Laboratory Teaching Assistant, Gonzaga University

2003 & 2005: Teaching assistant for General Chemistry for majors (Fall 2003), Ecology (Spring 2005), Bioanalytical Chemistry (Spring 2005), and Cell Biology (Fall 2005).

Learning Technology Developer, Gonzaga University Biology Department

2002 -2007: Authored and managed Biology Department website including Tree of Life. The Tree of Life website sought to enable students to maintain a coherent digital portfolio that journaled their undergraduate biology experience. This taxonomical tree was largely student created and collaborative.

PUBLICATIONS

Teaching and Learning

- Clegg, T., Hernly, K., Ahn, J., Yip, J., Bonsignore, E., Pauw, D., & Pitt, C. (2023). Changing Lanes: Relational Dispositions That Fuel Community Science Learning. *American Educational Research Journal*, 00028312231165909.
- Bih, J., Pauw, D., Clegg, T., & Weintrop, D. (2020). Building for robots: An alternative approach of combining construction and robotics. In *Proceedings of Constructionism 2020 Conference* (pp. 170-180).
- Clegg, T., Boston, C., Preece, J., Warrick, E., Pauw, D., & Cameron, J. (2020). Community-driven informal adult environmental learning: Using theory as a lens to identify steps toward concientización. *The Journal of Environmental Education*, 51(1), 55-71.
- Mills, K., Bonsignore, E., Pauw, D., Pitt, C., Hernly, K., Cabrera, L., Jeong, H., Yip, J., Ahn, J. & Clegg, T. (2019). Eliciting Scientific Funds of Knowledge Through Social Media Sharing in Formal Learning Environments. *American Education Research Association Annual Conference*. Toronto, Canada.
- Mills, K., Bonsignore, E., Clegg, T., Ahn, J., Yip, J., Pauw, D., Cabrera, L., Hernly, K., & Pitt, C. (2019). Connecting children's scientific funds of knowledge shared on social media to science concepts. *International journal of child-computer interaction*, 21, 54-64.
- Preece, J., Pauw, D., & Clegg, T. (2019). Interaction design of community-driven environmental projects (CDEPs): A case study from the Anacostia Watershed. *Proceedings of the National Academy of Sciences*, 116(6), 1886-1893.
- Ahn, J., Clegg, T., Yip, J., Bonsignore, E., Cabrera, L., Mills, K., Pauw, D., & Pitt, C. (2018). Designing Interactive Public Displays for Neighborhood Scientizing. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. New York: ACM.
- Cabrera, L., Ahn, J., Yip, J., Clegg, T., Hernly, K., Bonsignore, E., Pitt, C., & Pauw, D. (2018). Exploring practices on the move: Facilitating learning across a neighborhood. *Proceedings of the Thirteenth International Conference of the Learning Sciences – ICLS 2018*. London, UK: International Society of the Learning Sciences.
- Mills, K., Bonsignore, E., Clegg, T., Ahn, J., Yip, J., Pauw, D., Cabrera, L., Hernly, K., & Pitt, C. (2018, June). Designing to illuminate children's scientific funds of knowledge through social media sharing. In *Proceedings of the 17th ACM Conference on Interaction Design and Children* (pp. 266-277).
- Ahn, J., Clegg, T., Yip, J., Bonsignore, E., Pauw, D., Cabrera, L., Hernley, K., Pitt, C., Mills, K., Salazar, A., Griffing, D., Rick, J., & Marr, R. (2018, April). Science Everywhere: Designing Public, Tangible Displays to Connect Youth Learning Across Settings. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (p. 278). ACM.
- Uchidiuno, J., Clegg, T. L., Ahn, J., Yip, J. C., Bonsignore, E., Pauw, D., et al. (2017). Learning about Learning through Participatory Design with Families. In B. DiSalvo, J. C. Yip, E. Bonsignore, & C. DiSalvo (Eds.), *Participatory Design for Learning*. New York, NY.
- Clegg, T. L., Preece, J., Pauw, D., & Warrick, E. (2016). Environmental learning through the lens of affinity spaces: Transforming community members into a community force. *International Conference of the Learning Sciences 2016*.

- Yip, J. C., Clegg, T. L., Ahn, J., Uchidiuno, J., Bonsignore, E., Beck, A., et al. (2016). The evolution of engagements and social bonds during child-parent co-design. Presented at the SIGCHI Conference on Human Factors in Computing Systems. <http://doi.org/10.1145/2858036.2858380>
- Clegg, T. L., Ahn, J., Yip, J. C., Bonsignore, E., & Pauw, D. (2016). Scientizing with “ScienceKit.” *Educational Technology*, 56(3), 23–28.
- Pauw, D., Clegg, T. L., Ahn, J., Bonsignore, E., & Yip, J. C. (2015). Navigating connected inquiry learning with ScienceKit. <http://doi.org/10.2307/jeductechsoci.18.3.282?ref=search-gateway:cbd5764e2c6a54a6571165d03903d8a4> (*Presented at CSCL 2015 and supported by Jacob K. Goldhaber travel grant.*)
- Clegg, T. L., Bonsignore, E., Ahn, J., Yip, J. C., Pauw, D., Gubbels, M., et al. (2014). Capturing Personal and Social Science: Technology for Integrating the Building Blocks of Disposition. Presented at the International Conference of the Learning Sciences.
- Yip, J., Ahn, J., Clegg, T., Bonsignore, E., Pauw, D., & Gubbels, M. (2014). “It helped me do my science.” A Case of Designing Social Media Technologies for Children in Science Learning.
- Bonsignore, E., Ahn, J., Clegg, T., Yip, J. C., Pauw, D., Gubbels, M., et al. (2014). Selfies for science (pp. 133–136). Presented at the the companion publication of the 17th ACM conference, New York, New York, USA: ACM Press. doi:10.1145/2556420.2556482
- Staub, N.L., Pauw, P.G., and Pauw, D. (2006). Seeing the forest through the trees: Helping students appreciate life's diversity by building the Tree of Life. *The American Biology Teacher*. 68:149–151.

Cell and Molecular Biology

- Foss, M.H., Eun, Y.-J., Grove, C., Pauw, D.A., Sorto, N., Rensvold, J., Pagliarini, D., Shaw, J., Weibel, D.B. (2013). Inhibitors of bacterial tubulin target bacterial membranes in vivo. *Med Chem Comm*.
- Eun, Y.-J., Foss, M.H., Kiekebusch, D., Pauw, D.A., Westler, W.M., Thanbichler, M., and Weibel, D.B. (2012). DCAP: A Broad-Spectrum Antibiotic That Targets the Cytoplasmic Membrane of Bacteria. *J Am Chem Soc*. 134:11322–11325.
- Hejna, J., D. Bruun, Pauw, D., and Moses, R.E. (2010). A FANCD2 domain activates Tip60-dependent apoptosis. *Cell Biol. Int*. 34:893–899.
- Anders, K.R., Kudrna, J.R., Keller, K.E., Kinghorn, B., Miller, E.M., Pauw, D., Peck, A.T., Shellooe, C.E., and Strong, I.J.T. (2009). A strategy for constructing aneuploid yeast strains by transient nondisjunction of a target chromosome. *BMC Genet*. 10:36.
- Hemphill, A.W., Akkari, Y.M.N., Newell, A.H., Schultz, R.A., Grompe, M., North, P.S., Hickson, I.D., Jakobs, P.M., Rennie, S., Pauw, D., Hejna, J., Olson, S.B., and Moses, R.E. (2009). Topo IIIalpha and BLM act within the Fanconi anemia pathway in response to DNA-crosslinking agents. *Cytogenet Genome Res*. 125:165–175.
- McCabe, K.M., Hemphill, A., Akkari, Y.M.N., Jakobs, P.M., Pauw, D., Olson, S.B., Moses, R.E., and Grompe, M. (2008). ERCC1 is required for FANCD2 focus formation. *Mol. Genet. Metab*. 95:66–73.

PRESENTATIONS AND POSTERS

- Pauw, D., Cabrera, L., Hernly, K., Jeong, H., Mills, K., Pitt, C., Ahn, J., Yip, J., Bonsignore, E., Clegg, T. (Presented). Collaborative Joy Building with Digital Stickers. Presented as part of Pedagogies of Joy: Possibilities of Joy for Expansive Learning. American Educational Research Association Annual Conference 2019. Toronto.
- Pauw, D., Killen, H., Clegg, T., Preece, J. (Poster). Creating Successful Citizen Science Research Partnerships with Interest-Focused, Learning-Centered Communities. Presented at the Citizen Science 2019 Conference. Raleigh, NC.

- Pauw, D., Warrick, E., Boston, C., Preece, J., & Clegg, T. L. (2017). Connecting Affinity Spaces to Places and Back: A Look at Pokemon Go (pp. 275–278). Presented at the Computer Supported Cooperative Work, ACM. <http://doi.org/10.1145/3022198.3026345> (Poster).
- Boston, C., Clegg, T. L., Pauw, D., Preece, J., Warrick, E., Abdellahi, S., et al. (2017). Supporting Environmental Stewards' Needs with Technology (pp. 151–154). Presented at the Computer Supported Cooperative Work, ACM. <http://doi.org/10.1145/3022198.3026346> (Poster).
- Pauw, D., Yip, J., Bonsignore, E., Ahn, J., Gubbels, M., Rhodes, E., Lewittes, C., and Clegg T. (2014). Unseen Scientific Disposition: Detecting meaningful practices in technology-linked science learning. University of Maryland - College Park Department of Information Studies Doctoral Student Research Day. (Poster and Presentation).
- Kudrna, J., Pauw, D., Kinghorn, B., Peck, A., Platon, J., and Anders, K. (2006). A scheme to induce and selectively maintain specific N+1 disomes. Yeast Genetics and Molecular Biology Meeting, Princeton, NJ. (Poster).
- Pauw, D., and Anders, K. (2005). Manipulation of chromosome VI copy number in the yeast *S. cerevisiae*. Annual Murdock Undergraduate Research Conference at Northwest Nazarene College. Nampa, ID. (Poster).