

EDWARD H. TRAGER

- ed.trager@gmail.com
- unifont.org • [github](https://github.com) •

EMPLOYMENT

Data Architect Lead, [SOURCE Collaborative](#), Kellogg Eye Center, University of Michigan Health System (May, 2022 – present).

- Senior data architect for the Sight Outcomes Research Collaborative (SOURCE), a consortium of academic ophthalmology departments sharing de-identified electronic health record and ocular diagnostic test data on eye care recipients for research and quality-improvement projects.

Indigenous Languages Coordinator, [Center for Latin American and Caribbean Studies \(LACS\)](#), University of Michigan, Ann Arbor, Michigan (September 2020 – May, 2022, *part time*).

- Developed [Yoltok](#), a multimedia website and mobile app that provides resources for learning and teaching about the Nahuatl language and culture of Mexico. Funded by a U.S. Dept. of Education Title VI grant.
- Helped maintain digital and non-digital resources related to indigenous language learning and programs at the University.

ICAM ([International Center for Automotive Medicine](#)) Senior Software Developer, GSA - Acute Care Surgery (ACS), Dr. Stewart Wang, PI. University of Michigan Healthcare System, Ann Arbor, Michigan (August 2017 – May 2020 [RIF](#)). Major achievements:

- Developed [Vanessa](#), the ICAM crash investigation database, using a software stack consisting of PostgreSQL, Javascript, D3.js and Node.js.
- Also developed and maintained a PHI-secure, client-facing restricted-access version of [Vanessa](#) for the [VIPA Consortium](#) to investigate Vulnerable Road User (VRU) accidents.
- Wrote comprehensive documentation for the Vanessa and VIPA databases.
- Collaborated on automobile and pedestrian accident case reviews with a diverse group of stakeholders, including automotive engineers and fellows from General Motors, Audi, Volkswagon, Subaru, and Hyundai, tri-county sheriffs' departments, Ann Arbor Police, MDOT crash investigators, surgeons, nurses and data scientists.

Knowledge Architect in Bioinformatics, Kellogg Eye Center, University of Michigan Healthcare System, Ann Arbor, Michigan (May 2001 – August 2017). [Dr. Julia Richards Genetics Research Lab](#). Senior engineer and team lead on a number of software projects which supported genetic studies of hereditary diseases:

- Developed [Madeline 2.0 Pedigree Drawing Engine](#), a pedigree drawing engine for large and complex pedigrees.
- Developed GGD, the Gladiator Glaucoma Database, a web-based clinical and research data management system used in hereditary eye disease research. Gladiator was built on a software stack consisting of MySQL, PHP, Javascript, and the Apache web server on Linux.
- Developed Gladiator, a web-based clinical and research data management system for Age-related Macular Degeneration (AMD). Gladiator was built on a software stack consisting of MySQL, PHP, Javascript, and the Apache web server on Linux.
- Developed Cicada, a web-based system for managing marker data used in family-based genetic linkage studies. Cicada was built on a software stack consisting of MySQL, PHP, Javascript, and the Apache web server on Linux.

EDUCATION

University of Michigan School of Natural Resources and Environment (SNRE, now renamed to [SEAS](#)), Ann Arbor, Michigan. Master of Science in Forest Ecology and Management. Thesis: [Comparative morphology of red oak taxa in ecologically distinct ecosystems in Lower Michigan](#). Advisor: Dr. Burton V. Barnes. M.S., December 1997.

Johns Hopkins University School of Advanced International Studies (SAIS) and Nanjing University [Center for Chinese and American Studies](#), Nanjing, China. One-year graduate program in Chinese history, government, politics, economics, and international relations. All courses conducted in Mandarin. Full SAIS scholarship. Certificate, June 1987.

Oberlin College, Oberlin, Ohio. East Asian Studies major, Chinese Language and Literature concentration. Junior year abroad at the [Mandarin Training Center](#), National Taiwan Normal University, Taipei. Oberlin College scholarship, 1982-1986. B.A., May 1986.

SELECTED PUBLICATIONS

- Wang, SC, Brown, E, Cunningham, K, Horbal, SR, Rammelkamp, A, Kaufman, R, Trager, EH, Kohoyda-Inglis, C, Holcombe, S, Schneider, A, Roth, F, Joyner, J, Mueller, B, Ables, N, Keon, T. [Head Injuries from the Vulnerable Road User Injury Prevention Alliance \(VIPA\): Effect of Vehicle Type on Head Contact Location](#). Proceedings of the 2020 International IRCOBI Conference on the Biomechanics of Injury. 2020.
- Trager, EH, [Un nuevo sistema para la escritura náhuatl, A New System for Writing Nahuatl](#). Unifont.org, 2016.
- Trager, EH, Khanna R, Marrs A, Siden L, Branham K, Swaroop A, Richards JE. (2007). *Madeline 2.0 PDE: A new program for local and web-based pedigree drawing*. Bioinformatics 2007; doi: 10.1093/bioinformatics/btm242.
- Trager, EH. [Comparative morphology of red oak taxa in ecologically distinct ecosystems in Lower Michigan](#). Master's thesis, 1997.
- Krafchak CM, Pawar H, Moroi SE, Sugar A, Lichter PR, Mackey DA, Mian S, Nairus T, Elner V, Schteingart MT, Downs CA, Kijek TG, Johnson JM, Trager EH, Rozsa FW, Mandal MN, Epstein MP, Vollrath D, Ayyagari R, Boehnke M, Richards JE. (2006). [Mutations in TCF8 cause posterior polymorphous corneal dystrophy and ectopic expression of COL4A3 by corneal endothelial cells](#). Am J Hum Genet. 2005 Nov; 77(5):694-708. Epub 2005 Sep 14. PMID: 16252232.

PUBLISHED ARTWORK AND WEBSITES

- [Unifont.org](#). My personal web site which contains links to many interesting projects I have worked on.
- Technical illustrations in Richards, J.E. & Hawley, R.S., 2011. [The Human Genome, A User's Guide, Third Edition \(and Second Edition, 2005\)](#). Academic Press, Boston.
- Botanical illustrations in Barnes, B.V. & Wagner, W.H., 2004. [Michigan Trees, Revised and Updated: A Guide to the Trees of the Great Lakes Region](#). University of Michigan Press, Ann Arbor. 448 pp.
- Technical illustrations in Barnes, B.V. et al., 1998, [Forest Ecology, Fourth Edition](#). John Wiley & Sons, New York. 774 pp.

FOREIGN LANGUAGES

- *Thai*: Excellent communication skills in written and spoken Thai.
- *Chinese*: Good communication skills in written and spoken Mandarin.
- *Spanish*: Intermediate level, currently working to improve my Spanish.
- *Nahuatl*: Beginning level, currently working to improve my Nahuatl.
- *Other languages I have studied*: French, Arabic, Japanese, Latin, Classical Greek.

ADDITIONAL INTERESTS

- *Social Dancing*: Salsa, Bachata, Kizomba, West Coast Swing
- *Pond Hockey & Ice Skating*
- *Woodworking & Stone masonry*
- *Landscaping & restoration projects using native flora*
- *Illustration, Calligraphy & Photography*