

Cogan Shimizu Candidate Statement

Semantic Technologies Chair

I am honored to be considered a candidate for the Semantic Technologies Chair. I am an assistant professor of computer science at Wright State University, in Dayton, Ohio, where I direct the Knowledge and Semantic Technologies (KASTLE) laboratory. I received my Ph.D. (also in computer science) from Kansas State University in 2020. I completed my postdoctoral work under Pascal Hitzler, and I worked as the principal ontologist for the KnowWhereGraph project from 2020-2022. My lab's research program focuses on the development of knowledge graphs (KGs) and ontologies, primarily using pattern-based and modular design. Recently, I have had significant focus on methods and resources for teaching knowledge engineering (KE), as well as the principled and deep integration of AI/ML into KE practices (which we call Neurosymbolic AI). Of particular interest to this community, we are starting the construction of a KG-powered digital twin of Ohio. A full breakdown of my research can be found on my lab's website (kastle.cs.wright.edu/).

In my first year (so far) as STC Chair, I have organized guest speakers from across the KR, NeSy, and GeoAI spaces, as it pertains to the use of semantics in Earth-related data and knowledge. Further, I have engaged with RDA and the ESIP Discovery Cluster for driving the "Research Citation Object" and continued to engage with the SPASE 3.0 and heliophysics-related efforts with NASA. I am generally very interested in how knowledge graphs, paired with GIS, can affect change in local policy. The mission of ESIP still falls directly in line with my own personal mission, and I anticipate a continued successful partnership along this line.