Paul Rosen, Ph.D., assistant professor in Computer Science and Engineering received a National Science Foundation Faculty Early Career Development Program (CAREER) Award.

Rosen will use the award to investigate new methods for visualizing uncertainty using Topological Data Analysis. The approach will develop topology-based techniques for extracting features from ensembles and new visual analysis approaches for investigating those features.

Rosen and his research team will use their theoretic results to assist teams of biomedical engineers investigating conditions of myocardial ischemia and energy scientists at the National Renewable Energy Laboratory in building new tools to analyze uncertainties in their domains.

In addition, Rosen plans to work with students to develop intuitive methods of communicating uncertainties in data to laypeople.