Dr. David Johnson (Industrial Engineering & Political Science, Purdue University) is seeking a 0.25 FTE graduate research assistant for Spring 2022 to work on an interdisciplinary project funded by NSF’s Harnessing the Data Revolution program. Details of the project group are at http://iguide.illinois.edu. This student would contribute to the Convergence Science Catalysts team in one of two possible areas.

One topic is the tradeoffs, synergies and economic costs associated with sustainable agriculture policies. The project emphasizes cross-system and cross-scale impacts, for example how local or regional policies for groundwater or nitrogen management induce changes to production and environmental outcomes elsewhere in the world. The second topic is to better quantify flood risk and the socioecological impacts of flooding. This work will focus on integration of multiple data sets and models, and application of geospatial AI techniques, to support the development of new financial and policy tools for risk mitigation.

To apply, please submit a CV, unofficial transcript, statement of interest addressing your experience in one of these areas, and names and email addresses of two references, to davidjohnson@purdue.edu. A successful applicant should have applied research experience in at least one of the topical domains. Experience in methods for decision-making under uncertainty, surrogate modeling or machine learning, GIS analysis, spatial optimization, or multi-criteria decision analysis, are also desirable.

The position can start as soon as a suitable applicant is identified. The appointment is tentatively a 0.25 FTE assistantship for Spring and Summer 2022, with potential to extend into future years depending on performance. 0.5 FTE funding may also be available with funds from other projects, depending on the overlap between those opportunities and the student interests for contributing to this NSF project.