FY22/23 DAGSI Research Topic

1. **Research Title:** Advancing Analogical Reasoning for Artificial Intelligence
2. **Individual Sponsor:**

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3. **Academic Area/Field and Education Level**

Electrical Engineering (MS or PhD level)
Computer Science (MS or PhD level)
Biomedical, Industrial and Human Factors Engineering (MS or PhD level)

4. **Objectives:** Develop artificial intelligence capabilities through analogical reasoning
5. **Description:** There is a continual push to make Artificial Intelligence (AI) as human-like as possible; however, this has proven to be a difficult task. A significant limitation is the inability of AI to learn new information from what it currently knows. Analogical reasoning (AR), whereby learning by analogy is conducted, has been proposed as one method to achieve this end goal. Current AR models have their roots in symbolism, connectionist, or hybrid types indicating how analogies are evaluated. This project would advance the state of the art in AR and evaluate performance on multiple-choice word-based analogy problems.
6. **Research Classification/Restrictions:** unclassified
7. **Eligible Research Institutions:** Ohio State, Wright State, Ohio University, University of Cincinnati

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