Speaker: Professor Gopal Gupta, Co-director, Center for Applied AI and Machine Learning, The University of Texas at Dallas

Date and Time: 28th November 2022, 11:00 AM

Venue: Room 101 of Rajeev Motwani Building (RM101)

Title: Automating Commonsense Reasoning

ABSTRACT:

Automating commonsense reasoning, i.e., automating the human thought process, has been considered fiendishly difficult. It is widely believed that automation of commonsense reasoning is needed to build intelligent systems that can rival humans. We argue that answer set programming (ASP) along with its goal-directed implementation allows us to reach this automation goal. We discuss essential elements needed for automating the human thought process and show how they are realized in ASP and the s(CASP) goal-directed ASP engine developed in our lab. We also show how default rules, expressible in ASP, help solve the explainable AI problem.

BIO:

Gopal Gupta is a Professor of Computer Science at the University of Texas at Dallas and co-director of its Center for Applied AI and Machine Learning. From 2009 to 2020, he served as head of the CS department at UT Dallas. His areas of research interest are in automated reasoning, computational logic, and explainable AI. His group has published extensively in these areas and has authored many software systems, several of which are publicly available. His current research is focused on automating commonsense reasoning with the goal of achieving advanced general intelligence (AGI). To reach this goal his lab has developed several advanced reasoning systems and applied them to solving practical problems in AI. His lab has also developed explainable/interpretable AI systems. His research work has also resulted in commercial software systems that have formed the basis of start-up companies. His group has won several best-paper awards as well as the ICLP 2016 test-of-time award. Recently his research group was selected to compete in the 4th Amazon Alexa Prize Socialbot Challenge for 2020-2021. His research is currently supported by the US National Science Foundation and DARPA. He obtained his MS & PhD degrees from UNC Chapel Hill and his B.Tech. in Computer Science from IIT Kanpur, India.