TOPIC	(Enter Topic here)
ORGANIZERS	Student Leadership Council and Faculty of ACIT Institute and TECHLAV Center
AREA	A System-of-Systems perspective for information fusion system design and evaluation
SPEAKER	Dr. Ali K. Raz
DATE	Friday December 1, 2017
TIME	3:00 – 4:00 P.M. (EST)
VENUE	Fort IRC 410, North Carolina A&T State University, UTSA and SIPI will be joining through video-conferencing
FEES	No Charge

SYNOPSIS

This talk provides a System-of-Systems (SoS) perspective for integrated design and evaluation of an Information Fusion System (IFS). IFS is comprised of distributed and heterogeneous systems that accomplish low-level and high-level information fusion (LLIF and HLIF) functionality. LLIF and HLIF functions are developed independent from one another but require collaboration to achieve the IFS mission objectives. The distribution and heterogeneity of systems, in addition to the multiplicity of LLIF and HLIF functions, creates an extensively large design space for the IFS. We apply a SoS engineering architecting process to obtain integrated architectures of IFS. Furthermore, we elaborate a multi-agent system modeling approach and pair it with Design of Experiments for objective evaluation of the IF-SoS design space. The statistical analysis, based on analysis of variance (ANOVA) and Tukey Honest Significant Difference (HSD) Range Tests, quantifies the impact of variations in system design considerations on the IF-SoS performance.

ABOUT THE SPEAKER

Dr. Ali K. Raz is a research scientist at Purdue University's Center for Integrated Systems in Aerospace. His research interests are in System-of-Systems Engineering and Information Fusion Systems. Prior to joining Purdue University, he was a systems engineer at Honeywell Aerospace in Phoenix, AZ where he worked on Flight Control and Flight Management Systems. He holds a Bachelors and a Masters degree in Electrical Engineering from Iowa State University and a Ph.D. in Aeronautics and Astronautics from Purdue University. He is a certified systems engineering professional (CSEP) from the International Council on Systems Engineering (INCOSE).