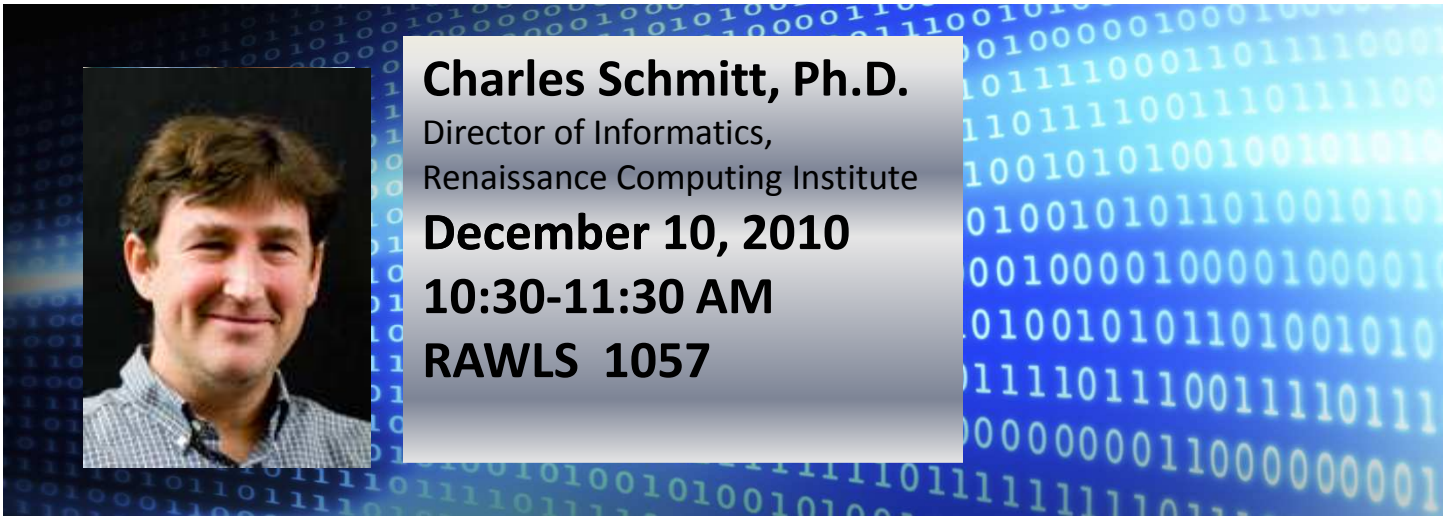
CYBER CENTER SEMINAR SERIES

Enabling Data Driven Research



Charles Schmitt, Ph.D.
Director of Informatics,
Renaissance Computing Institute
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RAWLS 1057

Speaker Bio

Dr. Schmitt is the Director of Informatics at the Renaissance Computing Institute (RENCI). In this role, he leads RENCI's efforts to assist research programs in the areas of bioinformatics, medical informatics, and health informatics, which includes projects in such areas as genomic sequencing, medical decision support, patient safety, data security, biometrics, and systems biology. He is PI on a DHS subgrant from the Institute for Homeland Security Solutions to investigate the design of biometric systems and an investigator on grants in the areas of population health, neurobiology, and genomics. Prior to joining RENCI, Dr. Schmitt worked for over 10 years in industry in the application of data mining and software engineering to fields including bioinformatics, market research, sales force optimization, and telecommunications. His Ph.D. work was in Computer Science at UNC-Chapel Hill in the area of neural network modeling for understanding human vision and recognition.

Presentation Abstract

Scientific communities have been rapidly expanding their ability to generate and use electronic data for exploration, modeling and simulations, and for generating and testing hypotheses. However, the current emphasis on data-driven discovery has generated new IT and informatics-related challenges that often impede the goals of these communities. These challenges, especially when coupled with the shifting hardware landscape, are also impacting the ability of campus computational and IT infrastructures to rapidly adapt to scientific demands. The Renaissance Computing Institute (RENCI) works with various scientific communities to assist in overcoming these challenges by leveraging new research in cyberinfrastructure, computer science, and information sciences. In this talk, we address the successes and limitations we've encountered in meeting those challenges with a focus on the gaps that new research in technology can address to move scientific domains forward.