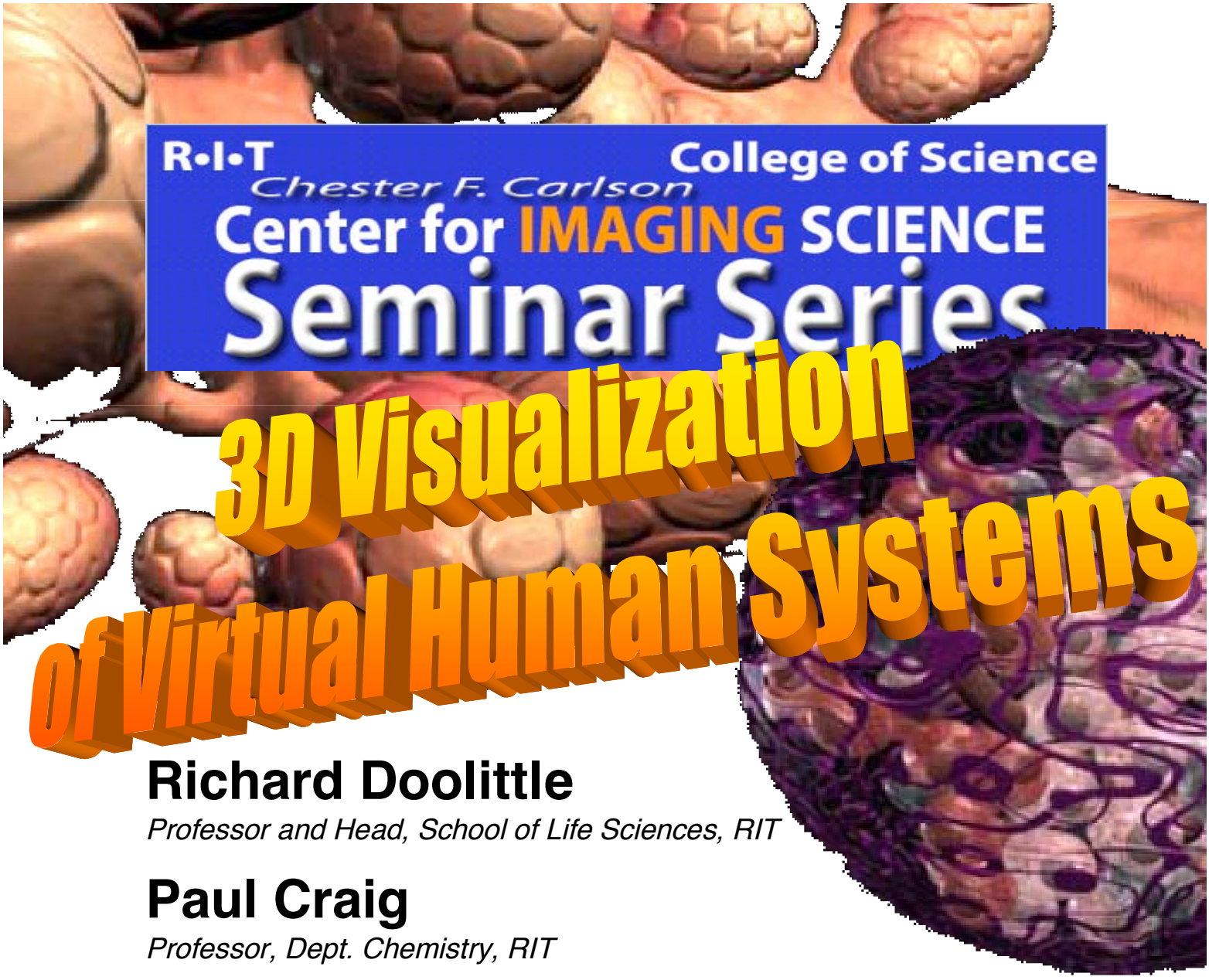

R•I•T College of Science

Chester F. Carlson Center for IMAGING SCIENCE

Seminar Series

3D Visualization of Virtual Human Systems

Richard Doolittle

Professor and Head, School of Life Sciences, RIT

Paul Craig

Professor, Dept. Chemistry, RIT

4pm, Wed., Dec. 20, 2006

3D Theater, 05-A400 (Library Basement)

Our research group of medical illustrators has investigated ways to teach structural design through the use of 3D graphical systems, possibly coupled with real-time interaction. New 3D graphics were created in pilot molecular, cellular, and whole organ system models. The goal of current work is to enable students learn within a fully interactive virtual environment. Users will be able to view all parts of organs through a wide range of magnifications down to the molecular level. The plan is to create a virtual human;a digital library of body organ systems that students may access to improve their understanding of structures and functions of the human organism.

www.cis.rit.edu/seminar

for up-to-date seminar schedule, video archives and abstracts.

Speakers Bios

Drs. Doolittle and Craig, professors at the Rochester Institute of Technology, have a combined 33 years of higher education classroom and laboratory experience in communicating ideas and mentoring students across a wide cross-section of disciplines. Paul Craig, professor in the Department of Chemistry, received a Ph.D. in Biological Chemistry from the University of Michigan in 1985, with specialization in enzymology and protein chemistry. He completed a post-doctoral fellowship in physical biochemistry at Henry Ford Hospital, where he studied the role of the factor Xa-antithrombin-heparin interaction in blood clotting. He spent 5 years as an analytical biochemist at BioQuant, Inc., a startup company in Ann Arbor, MI, where he developed and prepared reagents for radio- and enzyme linked-immunoassays, and worked on novel methods for sample collection and analysis for drugs of abuse. Since his arrival at RIT, Dr. Craig has helped to implement a new degree in Biochemistry while continuing research interests in proteomics and scientific visualization. Richard Doolittle, professor and Head of the School of Life Sciences, received a PhD in pathology and anatomy at the University of Rochester in 1980 with focused study in liver cell function and iron overload diseases. He worked for an additional year in the Hematology Unit in the Department of Medicine and spent time studying the influence of surface glycoproteins on processes of receptor-mediated phagocytosis in neutrophils. Current initiatives include working with Dr. Craig to complete a teaching and learning library of virtual human organ systems and collaborating with Risa Robinson, mechanical engineering, in the creation of a model to study disease processes and particle deposition within the human respiratory tract.