

# Physics Colloquium

Michigan Technological University

Thursday, December 13, 2007

4:00 - 5:00 pm

Room 139, Fisher Hall

## Protein Simulations on Massive Parallel Computers

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### ABSTRACT

In this talk, I will present some of the work done over the last two years as Head of the "Computational Biology and Biophysics" group at the John von Neumann Institute for Computing (NIC). During that time I had access to a number of massive parallel computers such as a BlueGene/L and, most recently, a BlueGene/P system that is now the second fastest computer in the world. I will discuss applications of these supercomputers to life sciences, especially the folding and interaction of proteins.

### BIOGRAPHY

Dr. Ulrich H.E. Hansmann is a Professor in the Department of Physics. He received his M.A. degree in philosophy, and his "Diplom" (equivalent to a M.S.) and Ph.D. in physics from the Freie Universität Berlin at Berlin, Germany. Professor Hansmann has an active research program in the areas of biomolecular modeling, complex systems and global optimization techniques. He has published more than 150 papers in various journals and conference proceedings (including prestigious journals such as Physical Review Letters and the Proceedings of the National Academy of Sciences) that received over the last four years between 200 - 250 citations annually. He has presented numerous invited and contributed talks at international conferences and workshops. His work has been sponsored by the National Science Foundation and the National Institutes of Health.