PROFILE

name: **Bernd Mayer**
function: **Group Leader**
mobile: **+43(699) 113 49 173**
email: **bernd.mayer@univie.ac.at**

PROFESSIONAL FOCUS

Numerical Methods in Genomics, Proteomics, and Metabolic Network Analysis.

MAJOR PROJECTS

- Structural analysis of Cyclodextrin host:guest complexes as models for enzyme – substrate interaction
- Combination of structure and circular dichroism computation in a Monte Carlo Simulated Annealing framework
- Computation of peptide folding with special focus on solvation effects
- Simulation of the assembly of micellar / membraneous structures
- Dynamical hierarchies as a formal framework for complex systems theory
- Simulation of intracellular reaction networks
- Differential gene expression and promoter analysis
- Antigenicity profiling of disease – associated proteins

PROGRAM SUITES

- **MultiMize**: Macromolecular structure optimizer
- **LMA**: Lattice Molecular Automaton, CA – based simulator
- **discoveryBASE**: Framework for lead discovery combining genomics and structural bioinformatics
- **GAnalyze**: Genetic algorithm – based promoter analysis

ACADEMIC BACKGROUND

1993.	MS, Molecular Biology, University of Vienna, Austria
1995.	PhD, Theoretical Chemistry, University of Vienna, Austria
1996-2000.	Research positions at University of Vienna (A), CNR Bologna (I), Los Alamos National Lab. (USA)
2004.	Venia docendi in Structural Biology, University of Vienna; Adjunct Professor at the Department of Theoretical Chemistry and Molecular Structural Biology

Over 100 full papers, book / conference contributions and invited talks in the area of Molecular Recognition, Differential Gene Expression Analysis, and Applied Computational Biology.