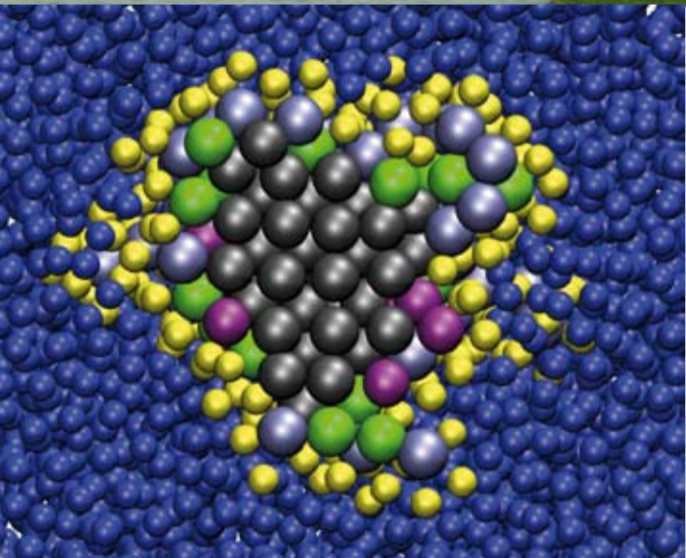


# Summer School

August 15 – 26, 2011, University of Oldenburg, Germany

## MODERN COMPUTATIONAL SCIENCE *SIMULATION OF EXTREME EVENTS*



### Fundamentals:

advanced programming, software engineering, rare-event theory, numerical methods, data analysis, Monte Carlo simulations

### Rare-event methods:

stochastic differential equations, large deviations, random matrices, maximum likelihood

### Socio-economic and Natural Systems:

extreme weather and stock-market events, crowd and traffic disasters

### Biomolecules:

transition path sampling, extreme polymer configurations, extreme sequence alignments

*for advanced (including PhD) students  
in Biology, Computer Science, Mathematics, and Physics*

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