

Section Computational Science

<http://www.science.uva.nl/research/scs>



The SCS aims to be a worldwide key player in the school of thought on computational science in research and education.

We seek to discover, through modeling and simulation, the way distributed information is being processed in complex systems. The applicability of this approach is validated through the development of distributed problem solving environments for asynchronous processes stemming from Biomedicine.

Past (1996 – 2000)

- Novel Parallel Algorithms
- Runtime support systems
- PDES CA
- Performance modeling and evaluation
- Malignant Cell Detection in peripheral blood
- Vesicle formation in 3D
- Brain activity modeling

Present (2001-2003)

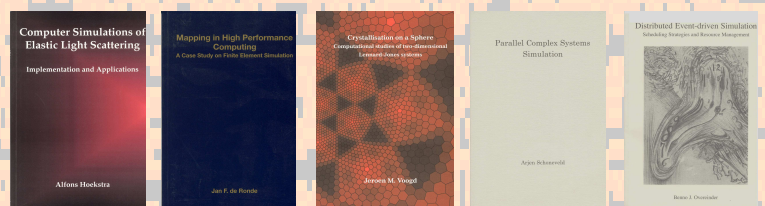
- Emergence in 3D CA's
- Polder Metacomputer
- Scientific computing on the Grid
- Interactive visualization in VR
- Preoperative by-pass planning
- Infectious disease expert system
- Morphogeneses of multicellular organisms

Future

- Fisher Information of CA's
- Distributed Interactive Simulation (HLA/Grid)
- Collaborative VR
- Health Grid: Integrative Information Processing
- Silicon Cell: Hierarchical modeling
- Emergence in Regulatory Networks

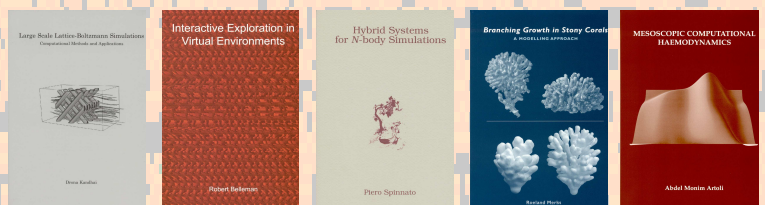
SCS by numbers

- Inaugurated in 1996
- Over 350 papers 1996-2003
- 10 PhD Theses and 45 MSc theses
- 12 NSF and 6 EU projects



SCS by names of permanent staff

- Prof. Dr. P.M.A. Sloot (chair)
- Dr. A.G. Hoekstra
- Dr. J.A. Kaandorp
- Dr. G.D. van Albada



Advisory board and permanent association:

- Fault tolerant computing
- Problem Solving Environments
- E-science
- ICCS and Numerical Algorithms
- Complex Systems
- Interactive Grid
- Prof. Dr. M. Livney (USA)
- Prof. Dr. G. Fox (USA)
- Prof. Dr. A.G. Hey (UK)
- Prof. Dr. J. Dongarra (USA)
- Prof. Dr. A.V. Bogdanov (Russian Federation)
- Prof. Dr. M. Bubak (Poland)