FB Angewandte Informatik   SS 2002
Veranstaltungsankündigung

Prof. Dr. R. Berrendorf: **Parallel Algorithms**
Wahlpflichtveranstaltung, 1. und 2. Semester MSc in CS
2 SWS Vorlesung, 1 SWS Seminar

Vorlesung/Seminar: Mi.   15:00 – 17:15 C177

Unterrichtssprache   English
Teaching Language:
Credits: 5

Voraus- Knowledge in algorithm design and complexity analysis
setzungen

Ziele Students should be able to design and assess non-numerical parallel algo-
rithms and suitable data structures for given problems to speed up computation.

Inhalt **Lecture**
The lecture treats advanced design concepts for parallel algorithms with an em-
phasis on non-numerical algorithms. Starting with principal questions on paral-
lelism, we discuss theoretical programming models (PRAM, BSP, LogP) well-
suited for complexity considerations in the parallel world. Based on this basic
knowledge several design techniques for parallel algorithms are introduced and
evaluated. Priority will be given to algorithm design techniques rather than paral-
lel programming techniques.

Seminar
Students work out relevant articles on parallel graph algorithms.

Abschluß **Leistungsnachweis**

Sonstiges Start: 17.4.2002

At the end of the term there will be the opportunity for an oral examination. The
Leistungsnachweis will be based on the result of the oral examination and the
individual contribution to the seminar.