

STEFANO MARKIDIS

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Education

- **Politecnico di Torino**—Torino, Italy
Master of Science in Nuclear Engineering: October, 2002
 - Grade: 105/110 (3.82/4)
 - Thesis under Prof. Gianni Coppa (Politecnico di Torino) and Prof. Giovanni Lapenta (Los Alamos National Laboratory) on *Development and Implementation of codes in JAVA language to study plasma simulations* at the Los Alamos National Laboratory. Object oriented programming in JAVA for space and astrophysics plasma simulations.
 - Broad curriculum in Nuclear Engineering. Relevant courses include: Computational Physics, Nuclear Engineering Heat Transfer and Fluid Flow, Reactor Theory, Plasma Physics, Quantum Mechanics, Transport Theory.
 - 1995-2002

Experience

- **UNM Computer Science Department**—Albuquerque, NM
Teaching Assistant for class cs351-Design of large programs: August 2005–present
 - Teach class lectures. Grade projects. Hold weekly office hours.
- **Los Alamos National Laboratory**—Los Alamos, NM
Visiting Scientist: July, 2005–August, 2005
 - Added a software package for solving Radiation-Diffusion equation in CartaBlanca Project.
- **Los Alamos National Laboratory**—Los Alamos, NM
Graduate Research Assistant: Jan, 2004–May, 2005
 - Developed a three dimensional parallel Particle-in-Cell code in C++. Implicit numerical schemes implemented for solving Maxwell equations. Examined MPI and C++ parallel performances against JAVA multithreading.
- **Zadi Company**—Carpi, Modena, Italy
Project Engineer: Jan, 2003–December, 2003
 - Design and project of dashboards for motorcycles. Microcontroller programming in C and in Assembler .
- **Los Alamos National Laboratory**—Los Alamos, NM
Graduate Research Assistant: April, 2002–October, 2002
 - Developed an object oriented Particle-in-Cell code in JAVA. Examined JAVA compilation issues and investigated JAVA compiler performances. Developed the same code in Fortran90 and investigated Fortran90 performances.

Skills

- **Languages:** Italian, English.
- **Operating Systems:** Linux, Mac OS, UNIX, Windows 98/2000/XP.
- **Computer Languages:** Fortran, C++, C, JAVA, L^AT_EX.
- **Tools:** MPI libraries, JAVA libraries for parallel computing, C++ and JAVA libraries for Unit Testing, Matlab.

Journal Publications

- Giovanni Lapenta, Stefano Markidis: *Plug and Play Approach to Validation of Particle-Based Algorithms*. Lecture Notes in Computer Science (3) 2005: 88-95.
- Stefano Markidis, Giovanni Lapenta, W. B. VanderHeyden, Zoran Budimlic: *Implementation and performance of a particle-in-cell code written in JAVA*. Concurrency - Practice and Experience 17(7-8) 2005:821-837.

Presentations

- **Joint ACM JAVA Grande & ISCOPE 2002**, Seattle, WA, *PARSEK: Object Oriented Particle-in-Cell. Implementation and Performance Issues*: Presented in quality of Advocate of Parsek Code Design.

Honors and Awards

- **R&D100**: Received as CartaBlanca Project developer from R&D Magazine to recognize the "100 most technologically significant products introduced in the past year". Developed a software package for solving Maxwell equations in CartaBlanca Project. Developed a software package for testing CartaBlanca Project performance.