

Dr. Wolfram Schroers / 施羅斯博士

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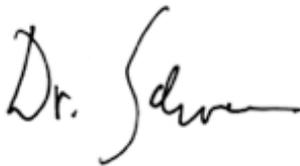


I am a developer and trainer who specializes in Enterprise applications based on iOS and their integration in existing environments using web services. As a physicist I have more than a decade of hands-on experience in applied mathematics, numerical simulation and data analysis. I support organizations in embedding iPhones and iPads into their infrastructure, starting from basic concepts up to the roll-out.

For more information, work samples and references please visit
<http://www.nua-schroers.de>

I am looking forward to hearing from you!

Yours truly,

A handwritten signature in black ink that reads "Dr. Schroers". The signature is fluid and cursive.

Dr. Wolfram Schroers



Professional main focus:

Enterprise application development for the iPhone and the iPad.

Education:

01/1999 - 12/2001 PhD studies, physics (Dr. rer. nat.)

10/1992 - 11/1996 Physics (Diploma)

Foreign languages:

Chinese Good knowledge, conversational level, basics of written language (about 1000 characters, traditional)

English Fluent

German First language

Russian Basic knowledge

Industry sectors:

Education / Training

Research and Development

IT / Internet

Web development



Operating systems:

Mac OS Experience since 1994

Unix Experience since 1997 (Administration and development)

Windows Mainly as an emulated system for testing and development

Programming languages:

C I use C regularly for development on Linux platforms

C++ I use C++ in selected projects, mainly together with MPI framework

Emacs Besides Xcode Emacs is my favorite editor

Fortran Used by me in scientific development projects since 1994

Make etc... My standard tool chain whenever I do not use Xcode

Objective C The main language for all iOS-development tasks

Python My favorite scripting language if results are needed quickly

Shell Some tasks are solved easiest from the command line.

My favorite shell: bash

TeX, LaTeX Use use this standard in technical documentation since 1992

Thorough experience in parallel programming (proprietary languages, MPI, OpenMP), numerical methods and simulations.

MacOS software development

Xcode, Cocoa Touch/iOS

Code documentation

Doxygen (C, C++), Pydoc (Python), TeX/LaTeX

Libraries/Frameworks

C standard libraries

Numerical libraries (GMP, BLAS, ARPACK, GSL, Minuit)

Enthought (numpy, scipy, matplotlib, Mayavi)

Cocoa Touch

Web technologies

In my self-developed CMS, which is based on Genshi / 原系 I regularly use HTML and CSS. Some data source files are stored as XML files and parsed using libXML2 with a Python engine.

Databases

I have used MySQL in the past and currently use SQLite in my website CMS.

High-performance/parallel computing/supercomputing

MPI, OpenMP (C, Fortran)

Calculation/Simulation/Validation:

FVM (finite volume method) Lattice gauge theory calculations

MKS (multi-body simulation) Molecular dynamics on parallel/high-performance machines

I frequently rely on self-developed solutions based on Python (scipy, numpy, matplotlib), C, Fortran and Mathematica. Several articles on my website contain work and code samples.

Professional experience:

10/2011: Tutorial on scientific data analysis using Python

Industry Sector: Software and services

Rolle: Trainer

Tasks: Development and presentation of a tutorial at a conference targeting engineers and scientists that use Python for ambitious numerical tasks. Two case studies are discussed in detail that demonstrate the strengths and weaknesses of Python. It is shown how numerical problems can be solved quickly and efficiently.

Used resources: Python (numpy, scipy, matplotlib, pyMinuit)

09/2011 - present: Development iPad

Industry Sector: Software and services

Role: Software developer

Tasks: Design and development of an iPad-app for a large international company. The app deals with modeling Thermoelectrical Cooling Elements and the interactive visualization of their physical properties.

Used resources: XCode (Objective-C, C)

08/2011: Training iOS (primarily in English)

Industry Sector: Software and services

Role: Trainer

Tasks: Introduction to development using iOS: design and wireframing of an iOS-app. The training program covered OO-design patterns in Objective-C, MVC, selected frameworks in Cocoa Touch, the workflow using XCode 4 and related tools and the deployment of apps in Enterprise environments.

Used resources: XCode (Objective-C, C)

05/2011 - 08/2011: Development iPad

Industry Sector: Software and services

Role: Software developer

Tasks: Development of an iPad-application for Enterprise in-house use. The client is listed in the German DAX index. The application exploits the platform's capabilities and thus uses GPS, photos, airprint, asymmetric RSA-encryption and several synchronization methods with the backend. The app reproduces parts of the client's database using Core Data.

Used resources: XCode (Objective-C, C), Python, SQL (Oracle)

03/2011: Port of an iPhone app

Industry Sector: Software and services

Role: Software developer

Tasks: Port a Windows-7 mobile app in the field of lifestyle to iOS.

Used resources: Xcode (Objective-C, C)

01/2010 - 11/2010: Consultant and developer, global prognostics GmbH (Germany)

Industry Sector: Consulting

Role: Software developer, trainer

Tasks: Consult on MacOS X transition and development, including iPhone and iPad. Develop and market a library for scientific and business graphics on iOS named PowerPlot, and a prototype application on the iPad based on the library.

Used resources: Xcode (Objective-C, C), AppleScript

08/2009 - present: Consultant and trainer, Abitz.com GmbH (Germany)

Industry Sector: Software and services

Role: Consultant, trainer

Tasks: Develop a presentation of speech recognition and organize events; market speech recognition software and services to clients. Develop and organize training in speech recognition, both in English and in German.

Used resources: Dragon NaturallySpeaking, MacSpeech Dictate/Scribe, AppleScript, MacOS X, Parallels Desktop, Windows XP, Windows 7

09/1997 - present: Web developer, <http://www.field-theory.org> and <http://www.nua-schroers.de> (Germany)

Industry Sector: Web design

Role: Web designer/developer

Tasks: Design and implement a CMS (content management system) for deploying and hosting websites. Contribute technical articles and software to the websites.

Used resources: Genshi, XML (Python, libXML2), HTML, CSS, PHP, Javascript, SVN, Java

01/2009 - 08/2009: Faculty, Academia Sinica (Taiwan)

Industry Sector: Research and development

Role: Visiting scholar (客座專家)

Tasks: Lead an international research collaboration with members from three continents; organize publication of the major publication concluding a six-year research project.

Used resources: numpy, scipy, matplotlib, Minuit, pydoc (Python, C), Wikimedia, SVN, TeX/LaTeX

10/2007 - 01/2009: Faculty, National Taiwan University (Taiwan)

Industry Sector: Research and development

Role: Visiting senior specialist (客座專家 / visiting professor)

Tasks: Review, evaluate, and present research results and proposals to students and fellow researchers. Teaching assignments (professorship) in nuclear physics, project management, parallel computing, visualization and scientific software development. Learn Chinese, work towards acquiring sufficient fluency to give presentations.

Used resources: Root, scipy, GSL, VTK, Keynote, MPI, OpenMP, CUDA (C, Fortran), TeX/LaTeX

10/2004 - 09/2007: Scientific numerical simulation, DESY/NIC (Germany)

Industry Sector: Research and development

Role: Research assistant (Postdoc)

Tasks: Implement and deploy software on parallel computers, manage and control production runs. Program statistical analysis software and apply it to the analysis of the production runs. Author several influential research papers and present results at international conferences.

Used resources: IBM BlueGene/L, SGI Altix, Scheme, Root, Minuit (C++), Keynote, CVS, SVN, TeX/LaTeX

08/2002 - 09/2004: Scientific numerical simulation, MIT, Cambridge (USA)

Industry Sector: Research and development

Role: Feodor-Lynen fellow (Alexander von Humboldt-foundation)

Tasks: Collaborate on a computer simulation to study the structure of matter on computer clusters. Write data analysis software. Implement the calculation environment and manage the operation. Mentor a student on a statistical analysis project. Pioneer the world's first calculation of nucleon generalized parton distributions.

Used resources: PC-Cluster/Linux-based (C, C++, Bash shell, Perl), Minuit, Numerical recipes, NAGlib, Scheme, CVS, TeX/LaTeX

03/2002 - 07/2002: Numerical analysis of simulation data, Regensburg University (Germany)

Industry Sector: Research and development

Role: Teaching and research assistant (Postdoc)

Tasks: Develop scientific software: invent a new statistical technique for improving data analysis. Teach electro-magnetism to under-graduate students.

Used resources: PC-Cluster/Linux-based, Intel compiler (C, C++), MPI (C), Minuit, CVS, TeX/LaTeX

10/2001 - 02/2002: Computer theoreticum, Wuppertal University (Germany)

Industry Sector: Research and development

Role: Teaching and research assistant (Postdoc)

Tasks: Instruct students in programming and parallel-computing algorithms. Develop and present a molecular dynamics parallel-computing project. The project became part of the physics curriculum for graduate students. Develop a visualization based on OpenGL using Qt.

Used resources: PC-Cluster/Linux-based, Intel compiler (Fortran), MPI (C, Fortran), Qt, OpenGL (C++)

06/1999 - 05/2001: System administrator, Wuppertal University (Germany)

Industry Sector: Research and development

Role: System administrator

Tasks: Manage and support the institute-wide computer systems. Migrate a cluster consisting of workstations (Sun, SGI) to a unified Linux-based environment. Provide the IT-infrastructure at a conference, based on a network of Linux machines.

Used resources: Sun/SunOS, Solaris, SGI/IRIX, PC Linux

01/1999 - 12/2001: PhD student (Physics), Wuppertal University (Germany)

Industry Sector: Research and development

Role: PhD student

Tasks: Develop a new algorithm for numerical simulation of nuclear structure on massively parallel supercomputers. Design a MySQL-database to store simulation results.

Used resources: CM-5, IBM Cray T3E, APE supercomputer, Alpha-cluster/Linux-based (C, C++, Fortran), MPI, RPC, Sockets (C), MySQL (SQL, Perl), CVS, TeX/LaTeX

04/1996 - 11/1996: Diploma student (Physics), Bochum University (Germany)

Industry Sector: Research and development

Role: Diploma student

Tasks: Develop a software for the multidimensional optimization of a functional in nuclear physics. Pioneer the installation of Linux on PC-systems.

Used resources: IBM RS6000/AIX (Fortran), PC (Linux), NAGlib, Numerical Recipes, TeX/LaTeX