Experience

April 2009 – Present	Radio Television Suisse (RTS) (Swiss public broadcasting)	Geneva, Switzerland

Technical Lead / Developer & Administrator, Multimedia Content Management System (CMS)

Operate, maintain and develop a Java/Linux based multimedia CMS Platform for RTS user base.

- Guide data integration project of an Enterprise Service Bus (ESB) between media asset management system (Dalet) and multimedia CMS (Escenic) and other business applications.
- Steer and plan administration and development projects of multimedia CMS platform using Scrum based methodology.
- Develop suitable metrics and gather statistics for project workload estimates, risk assessments, and platform support.
- Plan with stakeholders, task prioritization of new development cycles for administration and integration projects.
- Deployment testing of data integration applications between multimedia systems.
- Management 'on call' schedule (service piquet)
- Development of scripts and modules for administration and data integration projects (Linux shell scripting, Python, Java, XML/XSD, MySQL). *Developed collection of scripts for bulk file flow management and archiving.*

Mar. 2003 – Mar. 2009 **6 years**	California Institute of Technology	Pasadena, California Geneva, Switzerland

Staff Member, Physics Department (Scientific Software Engineer) / Technical Lead

Constructed, operated and maintained a global distributed Python based task life cycle infrastructure for physicists and engineers. The task lifecycle was deployed on several globally distributed locations and capable of managing jobs for the generation of 100 million Monte Carlo events per month.

- Technical lead for task life cycle software for distributed Monte Carlo simulation, within the CERN Compact Muon Solenoid (CMS) experiment. Development followed an iterative (1 month) development and release cycle akin to eXtreme Programming.
- Responsible for new software releases and high level testing. Interacted with various software groups within the CMS experiment on coordinated release of new software for end-users. *Developed scripts to manage project dependent releases based on the versioned direct acyclic graph concept. Developed scripts for comparing large configuration files and detect changes and updates, which reduces the setup time of an application and reduces errors in updating to a new version.*
- Redesigned the core of the distributed task life cycle infrastructure and data model. Developed various components for a task life cycle infrastructure. This work improved performance and increased maintainability of the code base. *The work employed the 2-phase factory pattern: phase 1 for selecting the database backend, phase 2 for selecting the proper Data Access Object (DAO).*
- Created applications for operators to handle and manage task requests, giving them a high level view of worldwide task progress.
- Simulated scenarios describing the data flow within the organization. The scenarios defined the potential risks in the global IT infrastructure used by our scientists.
- Application coordinator (until December 2007) for the Ultralight project to transform the traditionally passive (wide area) network to an active managed entity using active monitoring: Net Neutrality versus Quality of Service.
- Mentored and supervised foreign exchange students through grants from the US State Department.
- Participated in writing project proposals for funding agencies, including National Science Foundation and Department of Energy, ranging from $100k – $2000k to acquire continuous funding for our group`s work.
- Presented my group`s findings at conferences and collaboration meetings, and reporting to funding agencies.

Mar. 2002 - May. 2002 **3 months**	San Diego Supercomputer Center	San Diego, California

Visiting Scholar

- Worked on Web Services development and investigated information propagation through multiple layers of Web Services for debugging purposes.

Sep. 1999 - Jan. 2003 **3 years 4 months**	CERN (European Laboratory for Particle Physics)	Geneva, Switzerland

Software Technologist

Implemented C++ based data integration solutions for physicists. Results from this work formed the basis for my Ph.D.

- Developed integration strategies for data from various heterogeneous databases towards a coherent data model that gave an accurate description of the machine used in a scientific experiment. The model enabled users to perform more accurate simulations and correlation with real data (measurements). This model is still being used and maintained to reflect the current reality.
- Responsible for iterative requirements gathering, prototyping and testing of early data model prototypes.

Nov. 1997 – Aug. 1999 **1 year 10 months**	TNO-FEL (Dutch Institute for Defense Research)	The Hague, Netherlands

Software Developer

Built C++ based simulation models with mathematicians. Results from this work formed the basis for my thesis in Software Technology and Design.

- Designed and implemented a geographical information system to support a simulation environment for developing strategies, policies and risk assessments for mine sweeping. The system enables users to run more realistic scenarios with higher accuracy.
- Gathered requirements from model builders and included them in the iterative roundtrip engineering process.

Education

Mar. 2004	Eindhoven University of Technology	Eindhoven, Netherlands

Ph.D. Computer Science (Information Systems and Integration)

- Thesis: XML and Graphs for Modeling, Integration and Interoperability: a CMS Perspective

Sept. 1999	Stan Ackermans Institute, School for Technological Design Eindhoven University of Technology	Eindhoven, Netherlands

Professional Doctorate in Engineering (Embedded Systems and Information Systems)

- Thesis: Design and Implementation of the Mine Sweeping Strategy Testbed GIS

Aug. 1996	Utrecht University	Utrecht, Netherlands

Master in Applied Mathematics (Numerical and Graph Algorithms)

- Thesis: A Bulk Synchronous Parallel Minimum Degree Algorithm.

Professional

- Program committee member: International Conference on Computational Science, Beijing, China, May 2007; International Conference for High Performance Computing, Networking, Storage and Analysis, Tampa, Florida, Nov. 2006; IEEE International Conference on e-Science and Grid Computing: 2007 in Bangalore, 2006 in Amsterdam, and 2005 in Melbourne.
- Session chair, 8th ICATPP Conf. on Astroparticle, Particle, Space Physics, Detectors and Medical Physics Applications, Como (Italy) September 2003.
- More than 30 publications in magazines and conferences.
- Reviewing papers for journals and magazines
- Member of XOOTIC (http://www.xootic.nl). Dutch Alumni Association of Software Design Professionals

Awards:

- 2008 Corporation for Education Network Initiatives in California (CENIC) innovations award : http://cenic08.cenic.org/news/FinalCENIC08Awards.pdf
- 2007 Internet2 IDEA award: http://www.internet2.edu/idea/2007/

Technology Skills:

Object Oriented Design and Development (through UML), Python, HTML, Java, web services, MySQL, JavaScript, J2EE (Servlets, JSP, JSF) with Eclipse IDE, Oracle (SQL Developer) ,CVS, RPM, Unix/Linux, Windows, Unix scripting (e.g. sed/awk), Apache (Web Server, Axis, Ant, TomCat), C/C++. Rational Rose (roundtrip engineering), SQL developer. Experience with agile programming techniques such as extreme programming (XP) and Scrum.

Other

- Languages: Dutch - native, English - fluent, German - proficient, French – conversational
- Enjoy cycling, hiking, skiing, cross country, playing chess
- Photography (http://vanlingen.name/web/photos/).
- Open source projects: http://code.google.com/p/superpodder/, http://code.google.com/p/simple-simeng/
- Tutoring math to high school students.

Open Source Projects

Simple simeng: is a Java based discrete simulation engine that uses variable time steps. Events are inserted in an ordered queue, and time is advanced based on the time the next event needs to be executed instead of discrete predefined time steps. Entities can send events directly to other entities (one-to-one), or events can be broadcasted to subscribed entities (one-to-many). The simplicity of the engine makes it suitable for educational purposes. The engine uses various design patterns such as singleton, and observer pattern.

SuperPodder: a Java based podcast downloader. SuperPodder is meant to be simple and basic with a human readable format for storing your podcast feeds such that they are easy to share and modify, transparent transfer overview. The application makes an effort to find the download location of the podcast by using multiple RSS libraries. The SuperPodder application is based on the Model-View-Controller architecture.