Ruben Andrist

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Strong analytical and problem-solving scientist, enticed by complex challenges
Capable programmer with proven expertise in algorithmic coding contests
Tested project leader with experience in leading a non-profit organization

EXPERIENCE

Omidyar Fellow, Santa Fe Institute, NM, USA   *2013 – present*
· Was awarded a competitive named research fellowship (4 awards out of 265 applications)
· Co-published paper on designing improved benchmarks for the D-Wave 2 quantum computer
· Organized working group on algorithms for hard physical optimization problems

Programming Instructor, IT Services, ETH Zurich   *2008 – present*
· Developed and taught C++ and Python courses for ETH employees and researchers

Researcher, Institute for Theoretical Physics, ETH Zurich   *2008 – 2013*
· Developed C++ framework (4k lines) for rapid prototyping and large scale simulation of physical spin systems, allowing me to analyze several quantum error-correction codes during my Ph.D.
· Enabled extended research study by improving existing code's run-time from $O(n^2)$ to $O(n \log n)$
· Introduced bit-manipulations to efficiently model spin systems, providing a speedup of 35%

President / Project Leader, Swiss Olympiad in Informatics   *2004 – 2009*
· Coaching and selection of the Swiss delegation for the International Olympiad in Informatics

Software Developer, Department of Mathematics, ETH Zurich   *2004 – 2005*
· Developed Java applets to visualize current research projects (freelance, 4 months)

Flight Instruction by the Swiss Military, Birrfeld, Fribourg, Grenchen   *2002 – 2005*
· Completed FVS flight courses I+II (today SPHAIR) and private pilot's license (civilian)

EDUCATION

Ph.D. in Computational Physics, ETH Zurich   *2008 – 2012*
· Selected as head teaching assistant and substitute lecturer for multiple undergraduate courses
· Received ETH-Medal for outstanding doctoral thesis (top 8%)
· Current publication record: 10 papers, 90 citations, h-index 4

Diploma in Theoretical Physics, ETH Zurich   *2003 – 2008*
· Was awarded an exchange scholarship to study at St. Petersburg State University (1 year)

TECHNICAL STRENGTHS

Contests	Topcoder (top 10%), Code Jam '14 (round 2, rank 578), Codility '14 (gold), ACM-ICPC '06 and '07 (regionals, ranks 11 and 29), IOI '02 (bronze)
Languages	C/C++ (10 years), Python (4 years); familiar with Perl and Java
Toolchain	Vim, git, googletest, valgrind, gdb, gprof; familiar with Emacs, svn
Web/Script	Familiar with Nginx, Django, JavaScript, jQuery, Angular JS

OTHER INTERESTS

Languages	German (native), English (fluent), French & Russian (intermediate)
Sports	Ice hockey (Swiss Regional League), Snowboarding (Swiss J+S Instructor)