Andreas Lundblad

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EDUCATION

Ph.D. Theoretical Computer Science *Formal Methods / Runtime Verification* **2007–2013**
Royal Institute of Technology, Stockholm.

M.Sc. Computer Science, *Formal Design Techniques* **2002–2007**
Royal Institute of Technology, Stockholm.

Primary / **Upper Secondary School**, *Natural Science Program* **1990–2002**
Tensta Gymnasium, Stockholm.

EXPERIENCE

Senior Member of Technical Staff, *Oracle* **2013–present**

Member of the Langtools team which is responsible for tools such as javac, javap, javah and javadoc as well as parts of the core API. My work has mainly been focused on javac and a wrapper for javac called sjavac which adds support for incremental and parallel compilation.

Co-founder, *Comparific* **2011–present**

Back-end developer for the Android Application *Comparific* which is used to find the best cell-phone price plans based on call history and data usage. Currently analyzes over 200 price plans and add-ons. Challenges include combinatorial explosion of add-on combinations and designing the code to be simple and easy to maintain while still being able to handle all the different price plan variants (contracts, prepaid, pay as you go etc).

Founder, *Aioobe Software* **2008–present**

Built a custom CMS for a careers fair using Scala and LiftWeb. Features included invoice generation, host/exhibitor pairing and scheduling of exhibitor/student conversations. Have also developed a webshop for jewelry business and done some consulting (C++, Drupal and Word-Press development).

Researcher, *Royal Institute of Technology, KTH* **2007–2013**

Scientific research in fields of software security, runtime monitoring, binary rewriting, proof carrying code, concurrency, the Java memory model and distributed systems.

Taught courses such as automata theory, program semantics and analysis, logics, algorithms and data structures, complexity theory, program construction in C++, advanced algorithms, software development techniques.

Worked with HR. Tasks included introducing and taking care of newly employed researchers.

Primary advisor of three master's theses: *ADAPT: Automatically Distributed Anonymous Proxy Torrent*, *Monitor Inlining in ABS* and *TaintDroid-Integrated Policy Inliner*.

Programmer, *SAAB Technologies, Electronic Warfare Systems Division* **2003-2006**

Work included implementation of automatic tests and software development for anti-radar systems. Participated in meetings with the Italian Air force in Pratica de Mare, Italy.

HONORS/ AWARDS

30under30 Contest of 2014: Selected as one of Swedens top 30 tech executors / top 10 developers under the age of 30.

The Dragon of Enlightenment: Awarded for meritorious work in undergraduate education during 2011.

Honor Grant: Awarded to best M.Sc. student among Computer Science graduates of 2007 at Royal Institute of Technology, KTH.

ACHIEVEMENTS

Graduation Analyzer. Developed software for analyzing student grades and graduation constraints at KTH. It aggregated information from several data sources, analyzed it and produced Excel reports. The software cut down time consuming administrative tasks by orders of magnitude. It was later adopted by other institutions and is still used on a daily basis.

Multri.Net, a multiplayer Tetris game featuring team play, several play modes, online replays, an integrated tournament system, multiple high score lists and an Elo rating system. The server solves many challenging problems such as cheat prevention and client synchronization with minimal latency. (Java, 28 kloc)

Contributions at StackOverflow.com. Contributed with over 3000 answers in the *Java*, *C++*, *Android*, *Regex*, *algorithms* and *multithreading* tags since 2010. With a current rating of 200k, I belong to the top 100 (top 0.03%) users.

StackRating.com, a Elo based rating system for Stack Overflow users. Features include live monitoring of new posts through the StackExchange REST API and an a custom in-memory data model for fast page generation.

Best student in the course *Problem Solving and Programming under Pressure*.

TECHNICAL SKILLS

Know all ins and outs of the Java language and the core API. I've worked with the following frameworks and APIs: Wicket, Jersey, Hibernate, JPA, Guice, Jackson, Jongo, Apache POI, ASM, JFlex/JavaCUP, LiftWeb, Apache Commons, Guava. I also have experience with C/C++, Scala, Python, Prolog, Matlab, PHP, HTML, SQL, MongoDB, Mercurial, git and Subversion.

More importantly though: I'm always eager to pick up a book and learn something new!

INTERESTS

Apart from spending time with my wife and two daughters, I enjoy solving programming puzzles and participate in programming contests (both as contestant and problem author). I occasionally practice juggling and long distance running.

SCIENTIFIC PUBLICATIONS

ABS-NET: Fully Decentralized Runtime Adaptation for Distributed Objects
K. Palmskog, M. Dam, A. Lundblad, A. Jafari (ICE'13)

Inlined Reference Monitors: Certification, Concurrency and Tree Based Monitoring
A. Lundblad (Ph.D. thesis, 2013)

TreeDroid: A Tree Automaton Based Approach to Enforcing Data Processing Policies
M. Dam, G. Le Guernic, A. Lundblad (CCS'12)

Security Monitor Inlining and Certification for Multithreaded Java
M. Dam, B. Jacobs, A. Lundblad, F. Piessens (MSCS'11)

Provably Correct Inline Monitoring for Multi-threaded Java-like Programs
M. Dam, B. Jacobs, A. Lundblad, F. Piessens (JCS'10)

A Proof Carrying Code Framework for Inlined Reference Monitors in Java Bytecode
M. Dam, A. Lundblad (TR)

Security Monitor Inlining for Multithreaded Java
M. Dam, B. Jacobs, A. Lundblad, F. Piessens (ECOOP'09)

Verification Condition Generation and Discharge in a Hoare Logic with Recursion
A. Lundblad (M.Sc. thesis, 2007)

REFERENCES

Available upon request.