

Maciej Sobczak

I live and work in the Warsaw area, Poland.

Contact me by mail at:

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20+ years of experience in software engineering. Interests: formal methods, construction of safety-critical, embedded systems and development of core infrastructure (distributed systems, databases).

Education

1997 - 2003 M.Sc., 2003-2004 Ph.D. (not finished)

Warsaw University of Technology,
Faculty of Electronics and Information Technology.

Main field of studies: Software Engineering and Information Systems.

Job experience

October 2014 – (current position) GE Aviation, Engineering Design Center, Warsaw.

- **Position:** Senior Engineer (Controlled Title Holder).
- **What I do:** I guide the group of engineers in their understanding of aviation processes (DO-178C) and I take part in regular software lifecycle activities related to embedded avionics systems.

May 2012 – September 2014. X-Trade Brokers DM S.A., Warsaw.

- **Position:** Senior Developer, Team Leader, Scrum Master.
- **What I have done:** XTB is an innovative online broker with a range of products in the area of online trading. I have led a team of developers working on the public API services that allow external access to the trading system. I was also involved in general reliability engineering and recruitment activities.

June 2010 – (current position) Inspirel, Warsaw.

- **Position:** Founder and CEO, consultant.
- **What I do:** The Inspirel company operates in the area of distributed systems, high-integrity software construction and general technical consulting. I am involved in the complete software market cycle, from product design and development, collaboration management and project partnership to customer service, training and technical promotion.

March 2005 – February 2011. European Organization for Nuclear Research (CERN), Geneva.

- **Position:** Middleware Team Leader.
- **What I have done:** I have led a team of engineers responsible for proper operation of central middleware services in the accelerator complex. I took responsibility for ensuring fault-free service during critical period of the Large Hadron Collider accelerator start-up.

Earlier periods...

I will deliver description of previous positions and achievements on demand.

Professional memberships

In the period of 2010-2020 I was a direct member of *Ada-Europe*, an international organization promoting the use of Ada and sharing the industrial experiences related to safety, security and reliable software construction.

Open source experiences

SOCI

I was the founder and a long-term leader of the *SOCI* project, which is a C++ database access library. The library uses advanced programming techniques and provides innovative user-level features. The final product is frequently described as the best C++ database access library currently available on the market and was repackaged for inclusion in many official Linux distributions.

Publications

Books:

- "*Formal Methods Toolkit*", published by Lulu, describes the set of packages for using formal methods within the Mathematica computing environment.
- "*Ada and SPARK on ARM Cortex-M*", published by Lulu, explores the idea of using the Ada programming language on microcontrollers from the ARM Cortex-M family.
- "*Programming Distributed Systems with YAMI4*", published by Lulu and regularly updated following the evolution of the YAMI4 product (Inspirel).

Articles:

- "*Polymorphic Callbacks for Ada/C++ Bindings*", Ada User Journal, June 2010 No. 2 (31).
- "*Experiences ub Evaluating Ada with a Pilot Project*", Ada User Journal, December 2009 No. 4 (30).
- "*C++ 2.0 - Second edition of the C++ standard*", Software Developer's Journal, April 2006 No. 4 (136).
- "*IOStreams Storage*", C/C++ Users Journal, January 2006 Vol. 24, No. 1.
- "*C++/Tk - A Different View on GUI*", Software Developer's Journal, October 2005 No. 10 (130) and in *Programmation sous Linux*, November/December 2005 No. 1(1).
- "*The Efficiency of Using Functors with the C++ Standard Template Library*" (I.Szczesniak, M.Sobczak), presented at the Polish Linux Users Group Conference 2005, Krynica, Poland, April 2005.
- "*A Simple Oracle Call Interface*", Dr. Dobb's Journal, December 2004 Vol. 29, No. 12.
- "*STL Sequences & the View Concept*", C/C++ Users Journal, April 2004 Vol. 22, No. 4.
- "*YAMI: A Simple ORB Library*", C/C++ Users Journal, December 2003 Vol. 21, No. 12.
- "*Java-like Messaging System for C++ Classes*", C/C++ Users Journal, May 2003.
- "*An Iostream-Compatible Socket Wrapper*", C/C++ Users Journal, December 2001 Vol. 19, No. 12.

Apart from the articles listed above, I frequently publish technical texts on the Inspirel website.

Conferences

- *16th International Conference on Reliable Software Technologies Ada-Europe 2011, Edinburgh, UK*
I have prepared a half-day tutorial on "*Programming Distributed Systems with YAMI4*".
- *15th International Conference on Reliable Software Technologies Ada-Europe 2010, Valencia, Spain*
I have given an industrial presentation, "*Implementing Polymorphic Callbacks for Ada/C++ Bindings*".
- *The 10th International Conference on Accelerator and Large Experimental Physics Control Systems (iCALEPCS 2005)*. I have contributed to the paper "*The Controls Architecture for the LHC Collimation System*" and to the related poster.

Consultantships

- C++ Training for the team of programmers at Blue Crest Capital, Geneva.
- General consulting related to middleware and distributed systems solutions for the Brera Astronomical Observatory in Milan, Italy.
- Consultations and review of the Polish translation of the "*Modern C++ Design*" book by Andrei Alexandrescu, translated by Grzegorz Jakacki. The home page of this translation is at <http://www.nowoczesne-cplusplus.com/>.
- And more...