

# XML Security

Tomáš Knap

Supervisor: RNDr. Irena Mlýnková, Ph.D.

# Motivation & Goals

- Extensible Markup Language (XML)
    - General format for interchanging and/or storing data
  - Securing XML data using XML-aware mechanisms
    - Field level security
    - End-to-end security
  - Web services
    - Set of applications which are using XML messages with the standardized format
- Effective and secure Web services-based communication in enterprise applications

# Potential Cooperation

- Miroslav Novotný - project "Infrastructure for ensuring trustworthy transactions in Semantic web and P2P networks" – Trust and reputation management
- Other members of Web Semantization Research Group
  - Jan Dědek, Alan Eckhardt
  - <http://www.ksi.mff.cuni.cz/semwex/>
- Others, who are using XML data for interchanging and/or storing data

# Publications (2008 - )

- Knap, T. - **Comparison of Fully Software and Hardware Accelerated XML Processing**, Master Thesis
- Knap, T. - Mlynkova, I. - Necasky, M.: **Performance of Fully Software and Hardware Accelerated XML Processing and Securing**. Innovations '08: Proceedings of the 5th International Conference on Innovations in Information Technology, pages 64 - 68, Al Ain, United Arab Emirates, December 2008. IEEE Computer Society Press, 2008. ISBN 978-1-4244-3397-1.
- Necasky M. - Knap, T.: **Reconstruction of Normalized XML Documents**. Innovations '08: Proceedings of the 5th International Conference on Innovations in Information Technology, pages 213 -217, Al Ain, United Arab Emirates, December 2008. IEEE Computer Society Press, 2008. ISBN 978-1-4244-3397-1.
- Knap, T. - Mlynkova, I.: **Towards More Secure Web Services - Exploiting and Analysing XML Signature Security Issues**. RCIS '09: Proceedings of the 3rd International Conference on Research Challenges in Information Science, Fes, Morocco, April 2009. IEEE Computer Society Press, 2009. ISBN 978-1-4244-2864-9.
- Knap, T. - Mlynkova, I.: **Towards More Secure Web Services – Comparison of Various Approaches to XML Signature Verification Process**. ICWS '09: To appear in proceedings of the IEEE International Conference on Web Services, Los Angeles, USA, July 2009. IEEE Computer Society Press, 2009.
- Knap, T. - Mlynkova, I.: **Towards More Effective Web Services - Detecting Streamability Issues of Secured SOAP Messages**. (under preparation)

# Summary

- Topic: XML Security
  - Ph.D. student since September 2008
  - Member of the Web Semantization Research Group
    - <http://www.ksi.mff.cuni.cz/semwex>
  - Supervisor: RNDr. Irena Mlýnková, Ph.D.
- 
- Contacts:
    - Room: 208
    - Mobile: 00420-775-393-953
    - ICQ#: 315-102-977
    - E-mail: [Tomas.Knap@mff.cuni.cz](mailto:Tomas.Knap@mff.cuni.cz)

SeMWeX