

Kirill Belyaev

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EDUCATION

Doctor of Philosophy (Ph.D.) in Computer Science, Colorado State University, Fort Collins, Colorado, USA, 2012 - 2017.
Master of Science in Computer Science, Colorado State University, Fort Collins, Colorado, USA, 2009 - 2011.
Diploma, International Relations, Russian-Tajik Slavonic University, Dushanbe, Tajikistan, 1999 -2004.

Ph.D. Advisor

Professor Indrakshi Ray

RESEARCH INTERESTS

Secure and Dependable Systems, Protocols and Services, Access Control and Audit, Information Flow Control, XML Message Stream Processing, Publish-Subscribe Architectures, Database Systems

AWARDS AND HONORS

SECURITY 2016, Best Student Paper Award.

Fulbright Foreign Student, 2009-2011.

PUBLICATIONS

Conference Papers

1. Kirill Belyaev, Indrakshi Ray: Component-Oriented Access Control for Deployment of Application Services in Containerized Environments. Proceedings of 15th International Conference on Cryptology and Network Security (CANS 2016), LNCS Volume 10052, 383-399, 14-16 November 2016, Milan, Italy. Acceptance Rate: 25.8%
2. Kirill Belyaev, Indrakshi Ray: Towards Access Control for Isolated Applications. **Best Student Paper Award**. Proceedings of 13th International Conference on Security and Cryptography (SECURITY 2016): 171-182, 26-28 July 2016, Lisbon, Portugal. Acceptance Rate: 14%
3. Kirill Belyaev, Indrakshi Ray: Enhancing applications with filtering of XML message streams. Proceedings of 20th International Database Engineering & Applications Symposium (IDEAS 2016): 322-327, 11-13 July 2016, Montreal, QC, Canada. Acceptance Rate: 15%
4. Kirill Belyaev, Indrakshi Ray: Towards Efficient Dissemination and Filtering of XML Data Streams. Proceedings of 13th IEEE International Conference on Dependable, Autonomic and Secure Computing, (IEEE DASC 2015): 1870-1877, 26-28 October 2015, Liverpool, UK. Acceptance Rate: 29.6%
5. Kirill Belyaev, Indrakshi Ray, Indrajit Ray, Gary Luckasen: Personal health record storage on privacy preserving green clouds. Proceedings of 9th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing (IEEE CollaborateCom 2013): 448-457, 20-23 October 2013, Austin, TX, USA. Acceptance Rate: 27%

Journal Papers

1. Kirill Belyaev, Indrakshi Ray: On the Formalization, Design, and Implementation of Component-Oriented Access Control in Lightweight Virtualized Server Environments. Invited Paper. Journal of Computers & Security (C&S): Volume 71, pp. 15-35, Elsevier, 2017.
2. Kirill Belyaev, Indrakshi Ray: Component-Oriented Access Control – Application Servers Meet Tuple Spaces for the Masses. Journal of Future Generation Computer Systems (FGCS): Pages to appear, Elsevier, 2017.
3. Kirill Belyaev, Wuliang Sun, Indrakshi Ray, Indrajit Ray: On Design and Analysis of Protocols for Personal Health Record Storage on Personal Data Server Devices. Journal of Future Generation Computer Systems (FGCS): Volume 80, pp. 467-482, Elsevier, 2016.
4. Indrajit Ray, Kirill Belyaev, Mikhail Strizhov, Dieudonne Mulamba and Mariappan Rajaram: “Secure Logging as a Service – Delegating Log Management to the Cloud,” IEEE Systems Journal (ISJ), Vol. 7(2): 323-334, 2013.

Papers Under Review

1. Kirill Belyaev, Indrakshi Ray: Towards Service Orchestration in XML Filtering Overlays. 30th International Conference on Advanced Information Systems Engineering (CAiSE 2018), 11-15 June 2018, Tallin, Estonia.

Dissertations

1. Kirill Belyaev: On Component-oriented Access Control in Lightweight Virtualized Server Environments, Ph.D. Thesis, Colorado State University, 2017.
2. Kirill Belyaev: Hermes -- Scalable Real-Time BGP Broker with Routing Streams Integration, M.S Thesis, Colorado State University, 2011.

RESEARCH PROJECTS

- **Lightweight Policy Machine for Linux** - Framework for Component-Oriented Access Control in the Linux Server Environment – research grant from the National Institute of Standards and Technology (NIST) (Java, bash): <http://www.cs.colostate.edu/~kirill/lpm/lighthouse.html>
- **TeleScope** - Content-Based XML Transport Overlays (C): <http://www.cs.colostate.edu/~kirill/telescope/telescope.html>
- **Seshat** XML Content Filtering Engine Library - general-purpose library for applications that are involved in the XML message content filtering (Java): <https://github.com/kirillbelyaev/seshat>

REVIEW ACTIVITIES

IEEE Computing in Science and Engineering Magazine (IEEE CiSE 2017) – Invited reviewer

20th Information Security Conference (ISC 2017) – Ad hoc reviewer

43rd International Conference on Very Large Data Bases (VLDB 2017) – Ad hoc reviewer

12th International Conference on Information Systems Security (ICISS 2016) – program committee member

42nd International Conference on Very Large Data Bases (VLDB 2016) – Ad hoc reviewer

PROFESSIONAL EXPERIENCE

August 2014 – present: Graduate Research Assistant, Colorado State University, Department of Computer Science, Fort Collins, CO, USA

September 2013 – July 2014: Software & Database Engineer (Position offer), SAP Labs Americas, Special Projects Group, Palo Alto, California, USA

January 2013 – September 2013: HANA Cloud Infrastructure Engineer (Internship), SAP Labs Americas, HANA Cloud Division, Palo Alto, California, USA

January 2012 – January 2013: Ph.D. Student, Colorado State University, Department of Computer Science, Fort Collins, CO, USA

September 2011 – December 2011: HANA Cloud Performance Tools Engineer/Developer (Internship), SAP Labs Americas, HANA Cloud Division, Palo Alto, California, USA

September 2006 – July 2009: Core Mobile VoIP Platform Architect, Megafon Tajikistan – Mobile VoIP Division, Dushanbe, Tajikistan

February 2005 – June 2006: Lead Architect / Engineer, TajikTelecom JSC - State Telecommunications Operator, Dushanbe, Tajikistan

February 2004 – February 2005: Senior Network Administrator, InterCom Ltd - Private ISP, Dushanbe, Tajikistan

February 2003 – February 2004: Senior Network Administrator, TajikTelecom JSC - State Telecommunications Operator, Dushanbe, Tajikistan