

WfSAC Workshop: Workflow Security Audit and Certification

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1 Workshop Motivation and Goal

The automation of business processes by means of workflow management systems enables the flexible adjustment of enterprise systems to the current demand, which is highly appreciated at managerial level. Technically, it also provides for a systematic separation of processes and IT-architectures, allowing e.g. the seamless outsourcing of process fragments to a Cloud or the selection of different service sets for process execution.

Despite these immediate advantages, enterprises are still reluctant in fully relying on automated workflows. For instance, a recent survey carried out in Germany shows that merely 23% of the enterprises employ workflow management systems, whereas security, privacy and compliance concerns stand for the main inhibitors for new deployments [2]. While research, methodologies and corresponding tool-support lying at the intersection of business process management, security and privacy, and (formal) analysis could provide an appropriate basis for tackling these issues, the current state of the art fails to do so [1].

Certification to provably attest and control workflows' adherence to properties and *auditing* to detect violations happening at runtime are essential instruments to achieve reliably secure process-aware information systems. The WfSAC Workshop series on Workflow Security Audit and Certification brings together researchers and practitioners investigating and applying preventive and detective analyses to check security and compliance requirements for workflow models and the corresponding management systems.

2 Scientific Program

The program of WfSAC addresses these topics. WfSAC included two invited speakers, five long papers, and three short papers. The balance of academia and industry authors and audience shows that the topics addressed at WfSAC are of relevance to both communities, indicating a high potential to transfer research techniques into commercial tools.

Keynotes. The *academic* keynote of Prof. Dr. Ernesto Damiani (Milan U) presented the current state of the art and challenges on service certification, thereby summarizing the efforts in the EU-funded project ASSERT4SOA. The *industry* invited speech given by Dr. Mieke Jans (Hasselt U / Deloitte) addressed the use of Process Mining [3] in audits. Dr. Jans focused on the current technical limitations and economical inhibitors encountered in the application of Process Mining techniques in large-scale audits, indicating research topics to improve this situation.

Long papers.

- K. Haller (Swisscom, Switzerland): *Data-Privacy Assessments for Application Landscapes: A Methodology*
- J. Crampton (Royal Holloway, UK), M. Huth (Imperial College, UK): *On the Modeling and Verification of Security-Aware and Process-Aware Information Systems*
- S. Burri (ETH Zurich, Switzerland), G. Karjoth (IBM Research Zurich, Switzerland): *Flexible Scoping of Authorization Constraints on Workflows with Loops and Parallelism*
- A. Baumgraß et al. (Vienna WU, Austria): *Conformance Checking of RBAC Policies in Process-Aware Information Systems*
- E. P. Santos et al. (Curitiba Catholic U, Brazil): *Modeling Business Rules for Supervisory Control of Process-Aware Information Systems*

Short papers.

- E. Ramezani et al. (Furtwangen HS, Germany): *Separating Compliance Management and Business Process Management*
- S. Schefer et al. (Vienna WU, Austria): *Checking the Satisfiability of Binding Constraints in a Business Process Context.*
- T. Stocker (Freiburg U, Germany): *Time-based Trace Clustering for Evolution-aware Security Audits.*

3 Workshop Organizers

Dr. Rafael Accorsi is a lecturer at the Department of Telematics of the University of Freiburg. He leads the Business Process Security group, which focuses on well-founded methods for business process analysis, mining, auditing and forensics.

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Prof. Dr. Wil van der Aalst is a full professor at the Department of Mathematics & Computer Science of the Technische Universiteit Eindhoven. He chairs the Architecture of Information Systems group and has also part-time appointments in the Technology Management department of TU/e and the BPM group of Queensland University of Technology.

URL: <http://wwwis.win.tue.nl/~wvdaalst/>.

4 Program Committee

The WfSAC organizers would like to thank the PC-members for their great job producing detailed reports on the submitted manuscripts.

Achim Brucker (SAP Labs, DE)	Fabio Casati (Trento U, IT)
Jason Crampton (London U, UK)	Isao Echizen (NII, JP)
Aditya Ghose (Wollongong U, AU)	Jana Koehler (Lucerne U, CH)
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Steffen Staab (Koblenz U, DE)	Thomas Stocker (Freiburg U, DE)
Barbara Weber (Innsbruck U, AT)	Jan Martijn van der Werf (Eindhoven TU, NL)
Nicola Zannone (Eindhoven TU, NL)	

References

1. L. Lewis and R. Accorsi. Finding vulnerabilities in SOA-based business processes. *IEEE Transactions on Service Computing*, 4(3):230–242, August 2011.
2. Statistisches Bundesamt. *Unternehmen und Arbeitstätten. Nutzung von Informations- und Kommunikationstechnologien in Unternehmen (in German)*. Statistisches Bundesamt, 2011.
3. W. van der Aalst. *Process Mining – Discovery, Conformance and Enhancement of Business Processes*. Springer, 2011.