Nicolas Schnepf

FORMAL VERIFICATION AND SECURITY MANAGEMENT

Job experiences

2019-2021 **Postdoc about Quantitative verification of Networks with Link Failures**, *University of Aalborg*, Aalborg, Denmark.
Subject: design of verification methods for the quantitative analysis of networks with link failures

2016-2019 **PhD about orchestration and Verification of Security Functions for Smart Devices**, *INRIA Nancy*, Villers-lès-Nancy.
Subject: design of an orchestrator integrating formal methods for the enforcement of chains of security functions for Android devices

Mar 2016 – Aug 2016 **Second Internship of Master Degree**, *INRIA Nancy*, Villers-lès-Nancy.
Subject : Comparison of verification methods for supporting security chains in the context of Android Smartphones

Jun 2015 – Jul 2015 **First Internship of Master Degree**, *INRIA Nancy*, Villers-lès-Nancy.
Subject : Analysis of streaming downloads using the Bittorrent protocol

Education

2016-2019 **PhD in computer science**, *Université de Lorraine*, Villers-lès-Nancy.
Subject: Orchestration and Verification of Security Functions for Smart Devices

2015-2016 **Master Degree**, *Université de Lorraine*, Villers-lès-Nancy.
Master degree in computer science, specialization in formal verification and logics

2013-2016 **Engineering Degree**, *Télécom Nancy*, Villers-lès-Nancy.
Engineering degree in computer science, specialization in software engineering

2011-2013 **Technical Degree**, *Université de Lorraine*, Nancy.
Technical degree in software engineering

Publications

2021 **Stefan Schmid, Nicolas Schnepf and Jiri Srba (alphabetic order)**, *Proceedings of the 27th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2021)*.
Resilient Capacity-Aware Routing

2021 **Nicolas Schnepf, Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi**, *Communication Networks and Service Management in the era of Artificial Intelligence and Machine Learning*.
Automated Orchestration of Security Chains Driven by Process Learning

2019 **Nicolas Schnepf, Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi**, *PhD thesis*.
Orchestration et vérification de fonctions de sécurité pour des environnements intelligents

2019 **Nicolas Schnepf, Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi**, *Proceedings of the 16th IFIP/IEEE Symposium on Integrated Network and Service Management (IM 2019)*.
Automated Factorization of Security Chains in Software-Defined Networks

Myrdalsstræde 209 – st. By 9220 Aalborg – Denmark
☏ +33 6 22 37 53 84 • ✉ schnepf.nicolas@orange.fr

2019	**Nicolas Schnepf, Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi**, *Proceedings of the 16th IFIP/IEEE Symposium on Integrated Network and Service Management (IM 2019), Demonstration Track*.
	A Tool Suite for the Automated Synthesis of Security Function Chains
2018	**Nicolas Schnepf, Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi**, *Proceedings of the 16th IEEE/IFIP Network Operations and Management Symposium (IEEE/IFIP NOMS'18)*.
	Towards Generation of SDN Policies for Protecting Android Environments based on Automata Learning
2018	**Nicolas Schnepf, Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi**, *Proceedings of the 16th IEEE/IFIP Network Operations and Management Symposium (IEEE/IFIP NOMS'18), Demonstration Track*.
	Synaptic: a Formal Checker for SDN-based Security Policies
2018	**Nicolas Schnepf, Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi**, *18TH INTERNATIONAL WORKSHOP ON AUTOMATED VERIFICATION OF CRITICAL SYSTEMS (AVOCS'18)*.
	Rule-based Synthesis of Chains of Security Functions for Software-Defined Networks
2017	**Nicolas Schnepf, Stephan Merz, Rémi Badonnel and Abdelkader Lahmadi**, *Proceedings of the 3rd IEEE International Conference on Network Softwarization (IEEE NetSoft'17)*.
	Automated Verification of Security Chains in Software-Defined Networks with Synaptic

Computer skills

Design and implementation of a java command line interface for the model checker uppaal	Soon available
Python reproducibility package for TACAS 2021 paper	`https://doi.org/10.5281/zenodo.4421365`

Language skills

English	Fluent, TOEIC level obtained for the master degree
French	Native speaker

Interests

Reading	Novels, philosophy, psychology and sociology books
Intercultural exchanges	Participation in european and international events

References

PhD Supervisors

- Stephan Merz, stephan.merz@loria.fr
- Rémi Badonnel, remi.badonnel@loria.fr

Myrdalsstræde 209 – st. By 9220 Aalborg – Denmark

📞 +33 6 22 37 53 84 ● ✉ schnepf.nicolas@orange.fr