



Thesis : Security Consistency Management for Complex Systems

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IMT Atlantique / LabSTICC (UMR 6285) / P4S
ANR

Table of contents

1. Introduction

2. Subject

3. Backup slides

Introduction

My supervisors are M. Salvador MARTINEZ, M. Jean-Christophe BACH and M. Fabien DAGNAT.

The thesis started on 1st January 2025.

- M2 Software Engineering,

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 - Object-Oriented Programming, some Logic.
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- Know-how-to-be:
 - Intellectual curiosity, rigor, taste for new technologies.

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- [Matulevičius 2017, *Fundamentals of Secure System Modelling*],
- [Brambilla, Cabot, and Wimmer 2017, *Model-Driven Software Engineering in Practice*],
- [Wąsowski and Berger 2023, *Domain-Specific Languages*].

Questions?

Subject

"Security Consistency Management for Complex Systems"

(fr) "Gestion de la cohérence de la sécurité pour les systèmes complexes"

- [*Avionics 2025, Avionics*],

Example

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Example

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- [brutecat 2025, *Leaking the email of any YouTube user for \$10,000*]

Questions?

- DSML:

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 - S. Peldszus, Kulcsar, and Lochau (2015), S. Peldszus, Kulcsár, et al. (2016), S. Peldszus, Kulcsár, et al. (2018), S. Peldszus, Bürger, Kehrer, et al. (2021), S. M. Peldszus (2022), S. Peldszus, Bürger, and Jürjens (2023),

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 - Jürjens (2010), S. Peldszus, Bürger, and Jürjens (2024).
- Conceptual shift:
 - Guérin et al. (2021), Meier (2023), Guérin (2023).

- Next steps:

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- Perspectives:
 - A formal system for federation.

Questions?

Backup slides

Definitions

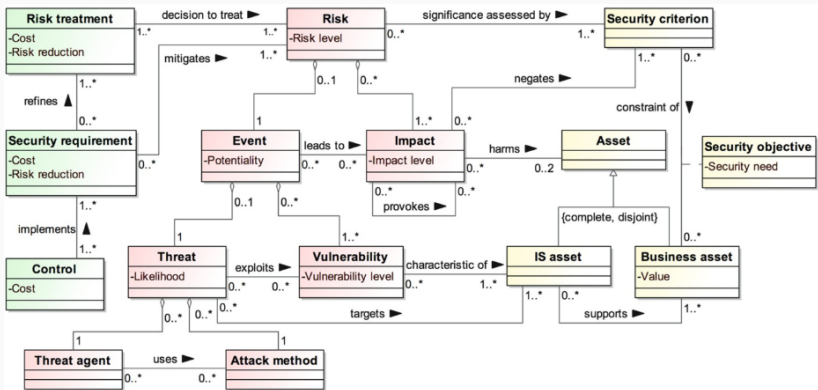













Figure 1: Information Systems Security Risk Management (ISSRM) domain model from Matulevičius (2017)

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