TENGFEI LI

Ph.D Candidate in East China Normal University

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EDUCATION

M.Sc.& Ph.D in Software Engineering

East China Normal University

- Sept 2014 – Dec 2020

- Advisor: Prof. Jing Liu
- Interests: Formal Specification and Verification
- Thesis: "STSL: Research on Spatio-Temporal Specification Language and its Axiomatisation and Decidability"

EXPERIENCE

Modeling, Analysis and Verification of Engine Health Management Platform

AVIC Aviation Motor Control System Institute

- Sep. 2015 – Dec. 2015   Wuxi, China

- Model and analyze aviation control system through tool OSATE
- Scheduling through Cheddar and Verifying by UPPAAL
- This project implements a modeling, analysis and verification methodology based on AADL to ensure the safety and reliability of the aviation motor control system.

Model Checking Open Parameterised Networks of Processes (pNets)

INRIA

- Apr. 2018 – Oct. 2018   Nice, France

- Proposing pM_μ to specify the properties of pLTS, and proposing opM_μ to specify the properties of Open Automaton;
- Improving algorithm to verify whether pLTS satisfies pM_μ properties and whether the Open Automaton meets the properties of opM_μ.
- Calling the constraint solver Z3 to complete the verification of Open Automaton.

PROJECTS

Spatial Verification

East China Normal University

- Java

- Spatial verification for spatial modal logic $S4_u$
- Link: https://github.com/thomassmile/spaver

Runtime Verification

East China Normal University

- Java

- Runtime verification for spatio-temporal specification language
- Link: https://github.com/thomassmile/stsl

PUBLICATIONS

📄 Journal Articles

- Li, Tengfei, Jing Liu, Haiying Sun, et al. (2020). "A Spatio-temporal Specification Language and its Completeness and Decidability". In: *Journal of Cloud Computing, Advances, Systems and Applications* 9 (1), pp. 1–21.
- Liu, Jing et al. (2019). "AADL+: a simulation-based methodology for cyber-physical systems". In: *Frontiers of Computer Science* 13 (3), pp. 516–538.

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:people: Conference Proceedings

- Li, Tengfei, Xiaohong Chen, et al. (2020). "Modeling and Verification of Spatio-Temporal Intelligent Transportation Systems". In: *IEEE International Conference on Trust, Security and Privacy in Computing and Communications*. IEEE.
- Li, Tengfei, Jing Liu, JieXiang Kang, Haiying Sun, Xiaohong Chen, et al. (2020). "Model Checking of Spatial Logic". In: *The 27th Asia-Pacific Software Engineering Conference*. IEEE.
- Li, Tengfei, Jing Liu, JieXiang Kang, Haiying Sun, Wei Yin, et al. (2020). "STSL: A Novel Spatio-temporal Specification Language for Cyber-Physical Systems". In: *The 20th IEEE International Conference on Software Quality, Reliability, and Security*. IEEE, pp. 309–319.
- An, Dongdong et al. (2019). "A Modeling Framework of Cyber-Physical-Social Systems with Human Behavior Classification Based on Machine Learning". In: *International Conference on Formal Engineering Methods*. Springer, pp. 522–525.
- Li, Tengfei (2019). "Spatio-Temporal Specification Language for Cyber-Physical Systems". In: *International Conference on Formal Engineering Methods*. Springer, pp. 517–521.
- Li, Tengfei, Jing Liu, Dongdong An, et al. (2019). "A Sound and Complete Axiomatisation for Spatio-Temporal Specification Language." In: *The 31st International Conference on Software Engineering and Knowledge Engineering*. KSI, pp. 153–204.

STRENGTHS

Java   Formal Verification   Statistical Analysis

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Hard-working   Eye for detail

LANGUAGES

Chinese   ● ● ● ● ●

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English   ● ● ● ○ ○

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French   ● ○ ○ ○ ○