Florian Tambon

PostDoc Researcher, University of Luxembourg

France | ✉ florian.tambon@uni.lu | ⊕ `https://florian-tambon.github.io/` | Languages: French (Mother Tongue), English (Fluent)

I'm a Postdoc researcher within the SerVal (Security, Reasoning and Validation) lab at the University of Luxembourg (SnT). My teaching and research interests are linked to applying **IA for Software Engineering** or **Software Engineering to IA**, as well as **Software Testing** or **Empirical Software Engineering**. Throughout my researches, I contributed to developing testing methods adapted to machine learning paradigms as well as the construction of taxonomies and user studies to describe the bugs, challenges and artefacts within IA libraries and/or the code generated.

Professional Experience

Postdoc Researcher, SerVal Lab - University of Luxembourg (SnT) - Luxembourg   February 2025 – Now

Education

PhD in Software Engineering, Polytechnique Montréal - Canada   Sept 2020 – Sept 2024

Thesis: **Who Tests the Testers? Assessing the Effectiveness and Trustworthiness of Deep Learning (DL) Model Testing Techniques**.

Master of Engineering, KyuTech - Japan   Sept 2018 – March 2020
Double Degree - *Thesis:* Content Style Disentanglement Autoencoder through Optimal Transportation.

Engineering Degree, Écoles des Mines de Saint-Étienne - France   Sept 2016 – March 2020
Fundamentals of maths, physics, computer science, management and communication. Specialisation in software and IA.

Teaching Experience

Lecturer

I'm currently in charge of a part of the Software Engineering course within the Bachelor of Computer Science at the University of Luxembourg. As the course needed to be redone from scratch, I collaborated to the construction of the whole course and I'm directly responsible for teaching the Software Testing part. I'm also contributing to the labs and grading of the students.

Software Engineering (Software Testing) - University of Luxembourg   Autumn 2025 (in progress)
(Lecturer) - Introduction to Software Testing, Test type (Black/White box), Testing methods (Unit tests, Mutation test, Fuzzing etc.) and Practical Applications (PyTest/Jest, MutMut, GitHub CI etc.)

Teaching Assistant

I was a Teaching Assistant for the Software Testing course and Introduction to Programming course for undergraduate students at Polytechnique Montreal. My job was to prepare labs, introduce them to students, clarify course points linked to the lab if necessary, answer their questions and grade the labs.

Introduction to Programming - Polytechnique Montréal   Autumn 2022, Autumn 2023
(Teaching Assistant) Fundamentals of programming with Python as an example: Program structure, Algorithms, Scientific Libraries and Oriented Object Programming.

Software Testing Methods - Polytechnique Montréal   Autumn 2021
(Teaching Assistant) Applying testing methods: Coverage testing, Control Flow Graph analysis, Unit and Mock tests, Oriented Object testing, Logic testing etc.

Selected Publications

Below is some selected publications. The remainder of my papers (as well as the preprint versions) are available via my Google Scholar profil or my personnal webpage.

Journal

[1] Tambon, F., Nikanjam, A., Zid, C., Khomh, F., & Antoniol, G. (2025). *TaskEval: Assessing Difficulty of Code Generation Tasks for Large Language Models*. ACM Trans. Softw. Eng. Methodol. `https://doi.org/10.1145/3773285`

[2] Tambon, F., Nikanjam, A., An, L., Khomh, F., & Antoniol, G. (2024). *Silent bugs in deep learning frameworks: an empirical study of keras and tensorflow*. Empirical Software Engineering, 29(1) `https://doi.org/10.1007/s10664-023-10389-6` [Presented at Journal-First track at the ACM International Conference on the Foundations of Software Engineering (FSE) 2024.]

[3] Tambon, F., Khomh, F., & Antoniol, G. (2023). *A probabilistic framework for mutation testing in deep neural networks*. Information and Software Technology (IST), 155, 107129. `https://doi.org/10.1016/j.infsof.2022.107129`

Conferences

[4] Mahu, A., Singh, A., Tambon, F., Ouellette, B., Delisle, J. F., Paul, T. S., ... & Doyon-Poulin, P. (2024). *Validation of Vigilance Decline Capability in a Simulated Test Environment: A Preliminary Step Towards Neuroadaptive Control*. Neuroergonomics and Cognitive Engineering, 45. `https://doi.org/10.54941/ahfe1004737` [Best Paper Award, Part of the DEEL Project]

[5] Kouemo Ngassom, S., Moradi Dakhel, A., Tambon, F., and Khomh, F. 2024. *Chain of Targeted Verification Questions to Improve the Reliability of Code Generated by LLMs*. In Proceedings of the 1st ACM International Conference on AI-Powered Software (AIware 2024). Association for Computing Machinery, New York, NY, USA, 122–130. `https://doi.org/10.1145/3664646.3664772`

[6] Tambon, F., Majdinasab, V., Nikanjam, A., Khomh, F., & Antoniol, G. (2023, April). *Mutation testing of deep reinforcement learning based on real faults*. In 2023 IEEE Conference on Software Testing, Verification and Validation (ICST) (pp. 188-198). IEEE. `https://doi.org/10.1109/ICST57152.2023.00026`

Professional Service

Reviewer	Transactions on Software Engineering and Methodology (TOSEM), 2025
	Transactions on Software Engineering (TSE), 2025
	Journal of Software Evolution and Process (JSEP), 2025
	Transactions on Software Engineering and Methodology (TOSEM), 2024
	Transactions on Software Engineering (TSE), 2024
	Software Quality Journal, 2022
Program Committee Member	3rd ACM International Conference on AI Foundationa Models and Software Engineering (FORGE), Research Track, 2026
	48th International Conference on Software Engineering, Shadow PC Track, 2026