Dear Dr. Chuangjie Xu,

I am Yee-Jian Tan, an incoming second-year Master's student at MPRI (Parisian Masters of Research in Computer Science), in France. I am writing to express my enthusiastic interest in attending the "Proof and Computation" Autumn School 2024 at Aurachhof. My research interests lie in Type Theory, Proof Assistants, and Logic, particularly in the metatheory of proof assistants, and I am planning to do a PhD in these areas. The courses offered by this autumn school align perfectly with my research focus on proofs and computation and are taught by wonderful professors, thus it would be a great honor to join the school in Fischbachau this September.

Since May 2024, I have been undertaking my Master's Year 1 internship with Yannick Forster at the Cambium team in INRIA Paris, working on the project "Towards Formalizing the Guard Condition of Coq." This project aims to produce a specification of the guard checker of the Coq proof assistant, which enforces a sufficient condition for termination on fixpoints. A sound guard condition will ensure the termination of fixpoint reduction and facilitate strong normalization proofs, ultimately proving the consistency of the type theory behind the Coq proof assistant. I was pleased to have presented my work at the Workshop on the Guard Condition of Coq, held on 3 June by the RECIPROG project in Nantes, France, where it was well received.

In 2022, I worked on formalizing the Modules system of Coq in MetaCoq during my undergraduate internship with Nicolas Tabareau. Together with co-supervisors Martin Henz and Yue Yang, I wrote my bachelor's thesis on the same topic, which received an A grade from the National University of Singapore, thus completing a dual bachelor's degree in Computer Science and Mathematics with Highest Distinction.

During the first two semesters of my Master's Year 1 (M1) in 2023-24, I studied the categorical formalization of type theory via Category with Families under the supervision of Ambrus Kaposi. This project culminated in a small formalization of (a less-dependent version of) Category with Families in Agda. Besides, among the courses I studied in M1, INF551 Computational Logic, taught by Samuel Mimram, was the most relevant to my research interests. I was awarded full marks (20/20) in this course, where I implemented, for the final project, a dependent type-checker / proof-assistant supporting Dependent Function types, Equality types, and Natural Number types.

As an international student studying in the expensive city of Paris, I am seeking funding to attend the autumn school, which I am eager to join but cannot afford without financial assistance. I believe this is an excellent opportunity to further my research and connect with like-minded researchers and peers, as I enter my final year in my master's programme and get ready for my PhD.

Thank you very much for considering my application, and I look forward to your favorable response.

Warmest regards,
Yee-Jian Tan