

WHO AM I?

I track down those elusive specifications, shaping them into precise formal models, and then throw them – or any other 'nobody's-dared-to-try-this' models – into the wild world of thorough fuzz-testing and validation against real-world machines. My goal is to ensure that this semantics is not only rock-solid but dances seamlessly with real-world dynamics. It's a balancing act, preventing it from stifling real-world behaviours or becoming excessively permissive (ensuring that we avoid scenarios as rare as unicorns).

My research spans

$$\left\{ \begin{array}{l} \text{architecture} \\ \text{languages} \end{array} \right\} \times \left\{ \begin{array}{l} \text{systems} \\ \text{theory} \end{array} \right\} \times \left\{ \begin{array}{l} \text{design} \\ \text{validate} \end{array} \right\} \times \left\{ \begin{array}{l} \text{model} \\ \text{verify} \end{array} \right\} \times \left\{ \begin{array}{l} \text{mechanise} \\ \text{fuzz test} \end{array} \right\}$$

Presently, my mission involves the challenging quest of validating RDMA semantics on TSO architectures.

As a post-doc, I ventured into two captivating realms: (1) crafting crystal-clear semantics for graphics shader languages – it's like teaching art to computers, and (2) validating the persistence semantics for weak memory – quite the challenge, as it turns out.

Back in my doctoral days, I was a fearless explorer at the intersection of formal methods and Software-Defined Networking.

And if we travel further back, I have been in the Telecom/IT industry for a respectable two decades, and I've got the scars to prove it.

EXPERIENCE AND EDUCATION

