Borja de Régil

borjaocook@gmail.com deregil.es github.com/ergl

Making strong consistency scale.

Areas of Interest

Distributed and Storage Systems Strong (consensus) and Weak Consistency (CRDTs) Thread-per-core programming language runtimes

Experience

Imdea Software Institute Research/Development Engineer June 2020—Current

Imdea Software Institute

Research Intern

October 2016—May 2020

Implemented and evaluated a new transactional protocol for strongly consistent distributed databases; implemented a relational (SQL) model adapter for key-value distributed storage; tested distributed programs via property checking (model checking); implemented an open-source library for batching and multiplexing TCP connections, which allowed to scale systems to handle up to 2.5 times more requests per second. The work was funded by an ERC grant *A Rigorous Approach to Consistency in Cloud Databases*.

Google Summer of Code, BEAM Community

Participant

May 2016—Aug 2016

Improved run-time performance of the Lasp programming language by applying deforestation techniques and control flow analysis.

Publications

Conferences

Manuel Bravo, Alexey Gotsman, Borja de Régil and Hengfeng Wei, *UniStore: A fault-tolerant marriage of causal and strong consistency.* USENIX ATC '21. [PDF]

Workshops

Borja de Régil and Christopher Meiklejohn, *Dynamic Path Contraction for Distributed, Dynamic Dataflow Languages.* AGERE 2016. [arXiv preprint]

Skills

Go, Erlang, R, shell scripting (*Professional Experience*) Java, Python, Pony, Javascript (*Fluent*) C, OCaml, Clojure, Rust (*Familiar*)

Education

B.S. in Computer Science

Complutense University of Madrid, Madrid

June 2020

Languages

English (Full professional proficiency)
Spanish (Native)