

Robert Escriva

Education

- August 2017 **Ph.D. in Computer Science**, *Cornell University*, Ithaca
Thesis title: Scaling Searchable and Transactional Storage Systems
- May 2010 **B.S. in Computer Science**, *Rensselaer Polytechnic Institute*,
Troy, NY

Experience

- 2020—2023 **Forced break due to medial issues**
- 2017—2020 **Software Engineer**, *Dropbox*, SF, CA
- I worked on the coredata and metadata core teams maintaining the Edgestore graph database, a petabyte-scale database holding Dropbox's metadata.
- Led coredata to reduce on-call incidents from weekly events to eventually go a quarter without incident.
 - Evaluated fitness of FoundationDB to replace MySQL within Edgestore.
 - Designed system-next and Panda, a scalable key-value store to serve as the backend for Edgestore.
 - Member of the metadata core team focusing on database operations and Panda testing.

Open Source Work and Other Projects

- April, 2023— **Cadence**
Present A productivity manager for tracking events in life that come rhythmically over time.
- 2023 **Setsum**
An order-agnostic hash function that operates on sets of strings.
- 2020— **Scrunch**
Present A high-entropy-compressed-full-text-search engine.
- 2020— **TupleDB**
Present A new ORM for key-value stores.
- 2022— **crates.io**
Present 30+ crates maintained at <https://crates.io/users/rescrv> with 9454 downloads.
- 2010-2015 **HyperDex**
HyperDex is an open source, scalable key-value store with 1.4K GitHub stars.

Papers

- Consus: Taming The Paxi. Robert Escriva and Robbert van Renesse. In *CoRR*, abs/1612.03457, 2016.
- The Design And Implementation Of The Warp Transactional Filesystem. Robert Escriva and Emin Gün Sirer. In Proceedings of the *Symposium on Networked System Design and Implementation*, Santa Clara, California, March 2016.
- Weaver: A High-Performance, Transactional Graph Database Based On Refinable Timestamps. Ayush Dubey, Greg D. Hill, Robert Escriva, and Emin Gün Sirer. In *Proceedings of the VLDB Endowment*, 9(11):852-863, 2016.
- Warp: Lightweight Multi-Key Transactions For Key-Value Stores. Robert Escriva, Bernard Wong, and Emin Gün Sirer. In *CoRR*, abs/1509.07815, 2015.
- Tiered Replication: A Cost-Effective Alternative To Full Cluster Geo-Replication. Asaf Cidon, Robert Escriva, Sachin Katti, Mendel Rosenblum, and Emin Gün Sirer. In Proceedings of the *USENIX Annual Technical Conference*, Santa Clara, California, July 2015.
- Kronos: The Design And Implementation Of An Event Ordering Service. Robert Escriva, Ayush Dubey, Bernard Wong, and Emin Gün Sirer. In Proceedings of the *European Conference on Computer Systems*, Amsterdam, The Netherlands, April 2014.
- HyperDex: A Distributed, Searchable Key-Value Store. Robert Escriva, Bernard Wong, and Emin Gün Sirer. In Proceedings of the *SIGCOMM Conference*, Helsinki, Finland, August 2012.
- An Introduction To HyperDex And The Brave New World Of High Performance, Scalable, Consistent, Fault-Tolerant Data Stores. Robert Escriva, Bernard Wong, and Emin Gün Sirer. In *login.*, 3(37):39-49, 2012.
- Measuring Behavioral Trust In Social Networks. Sibel Adali, Robert Escriva, Mark K. Goldberg, Mykola Hayvanovych, Malik Magdon-Ismael, Boleslaw K. Szymanski, William A. Wallace, and Gregory Todd Williams. In Proceedings of the *IEEE International Conference on Intelligence and Security Informatics*, Vancouver, Canada, May 2010.

Selected Talks

- Geo-Replicated Transactions in 1.5RTT. *StrangeLoop 2017*. St. Louis, Missouri, September 2017.
- Geo-Replicated Transaction Commit in 3 Message Delays. *Invited Talk, VMware*. Palo Alto, California, June 2017.
- The Design and Implementation of the Warp Transactional Filesystem. *NSDI*. Santa Clara, California, March 2016.
- Kronos: The Design and Implementation of an Event Ordering Service.. *EuroSys*. Amsterdam, The Netherlands, April 2014.
- HyperDex: A Distributed, Searchable Key-Value Store.. *ACM SIGCOMM Conference*. Helsinki, Finland, August 2012.