

# Design and Implementation of Transactional Causal Consistency in MongoDB\*

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## ABSTRACT

### PVLDB Reference Format:

xxx, xxx, Hengfeng Wei\*, Yu Huang, ..., and ... Design and Implementation of Transactional Causal Consistency in MongoDB. PVLDB, 14(1): XXX-XXX, 2020.  
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### PVLDB Artifact Availability:

The source code, data, and/or other artifacts have been made available at URL\_TO\_YOUR\_ARTIFACTS.

## 1 INTRODUCTION

### MongoDB.

*Transactions in MongoDB.*

*Snapshot Isolation in MongoDB.*

*Transactional Causal Consistency (TCC).*

*Challenges.*

*Our Contributions.*

- Design (and TLA<sup>+</sup> specification)

- Correctness proof (TLC model checking; TLAPS theorem proving)
- Implementation
- Jepsen Testing

## 2 PRELIMINARIES

## 3 RELATED WORK

### *Transactional Causal Consistency.*

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## 4 CONCLUSION