

# DB101 – Transactions

Goetz Graefe – Madison, Wis.

# Agenda

- Introduction – ACID properties
- Concurrency and concurrency control
  - Locking, false conflicts due to lock sizes & durations
  - Snapshot isolation, multi-version, optimistic cc
- Logging and recovery
  - Failure classes & their recovery
  - High availability
  - Disaster preparation & recovery
- Summary & conclusions

## Topics omitted

1. Distributed transactions
2. Online & incr'l schema changes – concurrent transactions
3. Deferred maintenance, backfill, “query time”
4. ...
5. Failures of recovery logs and of log archives