

# A Theory of Problems and Solutions in German/Chinese Software Engineering Collaborations

This thesis develops a theory of problems and solutions in German/Chinese software engineering collaborations. The goal is to better understand the challenges of such cross-cultural, cross-timezone collaborations and how they affect productive and/or software quality. The student performs a series of interviews, analyses them, and develops a theory of the challenges. From the theory, several pertinent hypotheses as to problems and solutions and how they affect productivity and/or software quality are derived. The student then designs and executes a hypothesis-testing survey. The student analyses the survey results to validate or invalidate these hypotheses.

## Work Results

- Literature review of cross-cultural, cross-timezone collaboration
  - In general, and in particular for German/Chinese collaborations
  - As it relates to productivity and software quality using appropriate metrics
  - Cross-X to determined from cross-cultural, cross-timezone, cross-location, etc.
  - Based on this work, we will decide whether to focus on productivity or software quality or both
- A theory of the challenges of cross-X collaboration wrt productivity and/or software quality
  - Performance of several (up to 6) interviews with engineering managers
  - Transcription and analysis of these interviews for theory generation
- In/validation of theory by way of selected pertinent hypotheses
  - Generation/derivation of a set of pertinent hypotheses from the theory
  - Development of a hypothesis-testing survey as to these hypotheses
  - Execution and analysis of the survey wrt hypotheses

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