2013 2nd SEMAT Workshop on a General Theory of Software Engineering

(GTSE 2013)

San Francisco, California, USA
26 May 2013
## Contents

### Foreword
Speeding-Up Software Engineering's Escape from Its Pre-paradigmatic Stage
  * Iaakov Exman — Jerusalem College of Engineering, Israel  ................................................................. 1

Uncovering Theories in Software Engineering
  * Klaas-Jan Stol and Brian Fitzgerald — Lero, Ireland; University of Limerick, Ireland  ............................. 5

On a Theory of Software Engineering: A Proposal Based on Transaction Cost Economics
  * Cengiz Erbas and Bahar Celikkol Erbas — ASELSAN, Turkey; TOBB University of Economics and Technology, Turkey . . . 15

Why (Meta-)Theories of Automated Software Design Are Essential: A Personal Perspective
  * Don Batory — University of Texas at Austin, USA ................................................................. 19

An Empirical Approach to a General Theory of Software (Engineering)
  * Mathias Ekstedt — KTH, Sweden  .................................................................................. 23

Forming Theories of Practices for Software Engineering
  * Kari Smolander and Tero Päivärinta — Lappeenranta University of Technology, Finland; Luleå University of Technology, Sweden 27

Possible Core Theories for Software Engineering
  * Paul Ralph — Lancaster University, UK ............................................................................. 35

A Theoretical Foundation for Software Engineering: A Model Calculus
  * Dewayne E. Perry — University of Texas at Austin, USA .................................................. 39

Generating a Useful Theory of Software Engineering
  * Steve Adolph and Philippe Kruchten — University of British Columbia, Canada  ......................... 47

On the Value of Essence to Software Engineering Research: A Preliminary Study
  * Pan-Wei Ng, Shihong Huang, and Yumei Wu — Ivar Jacobson Int., Singapore; Florida Atlantic University, USA; Beihang University, China ................................................................. 51