# TABLE OF CONTENTS

## KEYNOTE

Future Challenges for Software Data Collection and Analysis ................................................................. 1  
*B. Boehm*

## SESSION 1: EXPERIMENTAL PROCESS

Can We Build Software Faster and Better and Cheaper? ............................................................................. 43  
*Tim Menzies, Ousama Elwaras, Jairus Hihn, B. Boehm*

A Tree-Based Approach to Preserve Privacy of Software Engineering Data and Predictive Models ............... 52  
*Yu Fu, A. Gunes Koru, Zhiyuan Chen, Khaled El Emam*

Why Comparative Effort Prediction Studies May be Invalid ........................................................................ 64  
*B. Kitchenham, E. Mendes*

## SESSION 2: DEFECT PREDICTION

Validation of Network Measures as Indicators of Defective Modules in Software Systems .......................... 69  
*Ayse Tomni, Burak Turhan, A. Bener*

A Bayesian Network Approach to Assess and Predict Software Quality Using Activity-Based Quality Models .................................................................................................................. 78  
*S. Wagner*

Revisiting the Evaluation of Defect Prediction Models ............................................................................... 87  
*T. Mende, R. Koschke*

## SESSION 3: EFFORT ESTIMATION

Software Effort Estimation Based on Weighted Fuzzy Grey Relational Analysis ........................................ 97  
*M. Azzeh, D. Neagu, P. Cowling*

Convertibility of Functional Size Measurements: New Insights and Methodological Issues ....................... 107  
*L. Lavazza*

## KEYNOTE

Developing Accurate Risk Models Requires Mathematics, Domain Knowledge and Common Sense, Although Not Necessarily in that Order .............................................................................. N/A  
*B. Murphy*

## SESSION 4: INDUSTRY

Practical Considerations of Deploying AI in Defect Prediction: A Case Study within the Turkish Telecommunication Industry .................................................................................................. 119  
*A. Tosun, A. Bener, B. Turhan*

## SESSION 5: MACHINE LEARNING

Classification of Tasks Using Machine Learning ...................................................................................... 128  
*B. Bruegge, J. David, J. Helming, M. Koegel*