# Table of Contents

Message from SEmotion 2017 Workshop Chairs .................................................................................. vii
SEmotion 2017 Program Committee................................................................................................viii
SEmotion 2017 Reviewers.................................................................................................................... ix
ICSE 2017 Sponsors and Benefactors.................................................................................................... x

SEmotion 2017 Workshop Summary ................................................................................................... 1

*Nicole Novielli, Andrew Begel, and Walid Maalej*
— University of Bari; Microsoft Research; University of Hamburg

## Analysis of Users’ Emotion

Analyzing, Classifying, and Interpreting Emotions in Software Users’ Tweets ............................................. 2

*Grant Williams and Anas Mahmoud*
— Louisiana State University

On the Emotion of Users in App Reviews ................................................................................................... 8

*Daniel Martens and Timo Johann*
— University of Hamburg

Using Emotions to Empower the Self-Adaptation Capability of Software Services ................................. 15

*Nelly Condori-Fernandez and Franci Suni Lopez*
— Vrije Universiteit Amsterdam

## Emotion Modeling and Measurement

Towards the Assessment of Stress and Emotional Responses of a Salutogenesis-Enhanced
Software Tool Using Psychophysiological Measurements ......................................................................... 22

*Jan-Peter Ostberg, Daniel Graziotin, Stefan Wagner, and Birgit Derni*
— University of Stuttgart; University of Tübingen

OpenAffect API: A Proposal for Enabling an Ecosystem of Emotion Awareness Tools ............................... 26

*Olivier Liechti and Rodney Reis*
— University of Applied Sciences and Arts Western Switzerland; Avalia Systems
Emotional Awareness in Software Development: Theory and Measurement ............................................ 28
Alexandra Fountaine and Bonita Sharif
— Youngstown State University

Emotions in Software Development

Characterizing and Predicting Mental Fatigue During Programming Tasks ........................................... 32
Saurabh Sarkar and Chris Parnin
— Microsoft USA; North Carolina State University

Using Playful Drawing to Support Affective Expressions and Sharing
in Distributed Teams ................................................................. 38
Mengyao Zhao, Yi Wang, and David Redmiles
— University of California, Irvine; Rochester Institute of Technology

Consequences of Unhappiness while Developing Software ................................................................. 42
Daniel Graziotin, Fabian Fagerholm, Xiaofeng Wang,
and Pekka Abrahamsson
— University of Stuttgart; University of Helsinki; Free University of Bozen-Bolzano;
Norwegian University of Science and Technology

Toward a Model of Emotion Influences on Agile Decision Making ..................................................... 48
Abdulaziz Alhubaishy and Luigi Benedicenti
— University of Regina

Connecting the Dots: Measuring Effectiveness and Affectiveness
in Software Systems ................................................................. 52
Marco Ortu, Giuseppe Destefanis, Steve Counsell, Michele Marchesi,
and Roberto Tonelli
— University of Cagliari; Brunel University

Reviewing Literature on Time Pressure in Software Engineering and Related
Professions: Computer Assisted Interdisciplinary Literature Review ..................................................... 54
Miikka Kuutila, Mika V. Mäntylä, Maëllick Claes, and Marko Eloainio
— University of Oulu; University of Helsinki

Author Index .............................................................................................................................................. 60