## FOCUS

### RELEASE ENGINEERING 3.0

#### 22 Guest Editors’ Introduction

**Release Engineering 3.0**

Bran Adams, Stephany Bellomo, Christian Bird, Boris Debić, Foutse Khomh, Kim Moir, and John O’Duinn

#### 26 Continuous Experimentation: Challenges, Implementation Techniques, and Current Research

Gerald Schermann, Jürgen Cito, and Philipp Leitner

#### 32 Correct, Efficient, and Tailored: The Future of Build Systems

Guillaume Maudoux and Kim Mens

#### 38 Continuous Delivery: Building Trust in a Large-Scale, Complex Government Organization

Rodrigo Siqueira, Diego Camarinha, Melissa Wen, Paulo Meirelles, and Fabio Kon

#### 44 Over-the-Air Updates for Robotic Swarms

Vivek Shankar Varadharajan, David St Onge, Christian Guß, and Giovanni Beltrame

## FEATURES

#### 52 Practitioners’ Agile-Methodology Use and Job Perceptions

Wenying Sun and Cecil Schmidt

#### 62 A Scalable, Reactive Architecture for Cloud Applications

Andrzej Debski, Bartłomiej Szczepanik, Maciej Malawski, Stefan Spahr, and Dirk Muthig

#### 72 AngularJS Performance: A Survey Study

Miguel Ramos, Marco Tulio Valente, and Ricardo Terra
DEPARTMENTS

4 From the Editor
The Challenges and Practices of Release Engineering
Diomidis Spinellis

11 Invited Content
Recent Progress in Software Security
Edward Amoroso

14 On DevOps
A Cambrian Explosion of DevOps Tools
Mik Kersten

18 Reliable Code
Curve Balls
Gerard J. Holzmann

80 Software Technology
Different Databases for Different Strokes
Gregory Vial

86 Requirements
Requirements Engineering and Continuous Deployment
Nan Niu, Sjaak Brinkkemper, Xavier Franch, Jari Partanen, and Juha Savolainen

91 Insights
Making Sense of Agile Methods
Bertrand Meyer

96 Redirections
The Unreasonable Effectiveness of Software Analytics
Tim Menzies

99 The Pragmatic Architect
Agility, Risk, and Uncertainty, Part 1: Designing an Agile Architecture
Michael Waterman

102 Practitioners’ Digest
Software Maintenance and Evolution and Automated Software Engineering
Jeffrey C. Carver and Alexander Serebrenik

105 Software Engineering
Harsh Sinha on Product Management
Bryan Reinero

MISCELLANEOUS

6 Contact Us
8 Reviewer Thanks
51 IEEE Computer Society Information