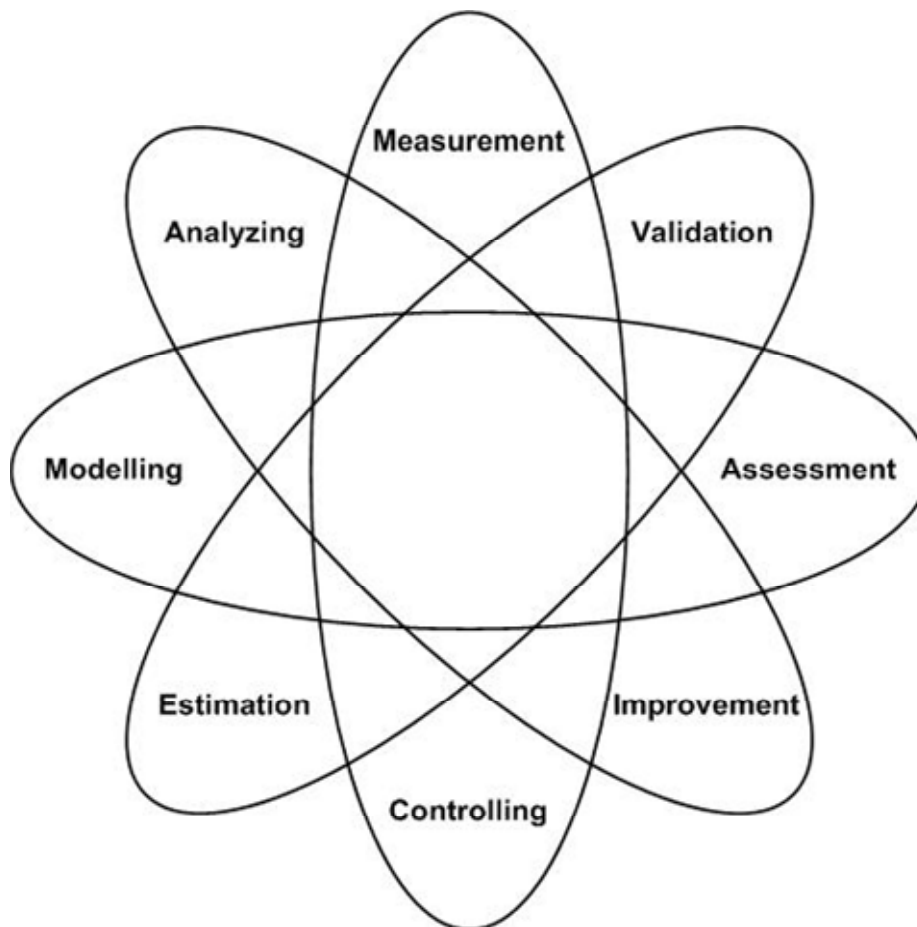


SOFTWARE MEASUREMENT NEWS

Journal of the Software Metrics Community



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The *SOFTWARE MEASUREMENT NEWS* can be ordered directly from the Editorial Office (address can be found below).

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IWSM/MENSURA 2011

The Joint Conference of 21th International Workshop on Software Measurement (IWSM) and 6th International Conference on Software Process and Product Measurement (MENSURA)

November 3-4, 2011

Nara Prefectural New Public Hall, Nara, Japan

<http://mensura.wordpress.com/>



IWSM-MENSURA2011 Preliminary Program

November 3 – IWSM/Mensura Day 1

Start	Noh theatre (Main Hall)	Conference Room 1	Conference Room 2
9:00 9:20	Registration (at registration desk)		
9:20 9:40	Opening		
9:40 10:50	Keynote 1 Business Analytics and Optimization in Software Development: Experience at IBM Rational (<i>Tsutomu Kamimura</i>)		
10:50 11:00	Break (10min)		
11:00 12:30	Session 1A (Full papers) 30min each Size and Performance Measurement Chair: <i>Sylvie Trudel</i>	Session 1B (Full papers) 30min each OSS / Repository Mining Chair: <i>Takayuki Omori</i>	Session 1C (Short papers) 22min each Software Verification Chair: <i>Haruaki Tamada</i>
	Design of a Functional Size Measurement Procedure for Real-Time Embedded Software Requirements Expressed using the Simulink Model (<i>Hassan Soubra, Alain Abran, Stern Sophie and Amar Ramdane-Cherif</i>)	An Analysis of Gradual Patch Application – A Better Explanation of Patch Acceptance (<i>Passakorn Phannachitta, Pijak Jirapiwong, Akinori Ihara, Masao Ohira and Kenichi Matsumoto</i>)	Improvement of a Visualization Technique for the Passage Rate of Unit Testing and Static Checking and its Evaluation (<i>Yuko Muto, Kozo Okano and Shinji Kusumoto</i>)

	<p>CompSize: Automated Size Estimation of Embedded Software Components (<i>Kenneth Lind, Rogardt Heldal, Tigran Harutyunyan and Tony Heimdahl</i>)</p>	<p>Good or Bad Committers? A Case Study of Committers' Cautiousness and the Consequences on the Bug Fixing Process in the Eclipse Project (<i>Anakorn Jongyindee, Masao Ohira, Akinori Ihara and Kenichi Matsumoto</i>)</p>	<p>Translation Pattern of BPEL Process into Promela Code (<i>Ryosuke Nakashiro, Yasutaka Kamei, Naoyasu Ubayashi, Shin Nakajima and Akihito Iwai</i>)</p>
	<p>Caching Highly Compute-intensive Cloud Applications: An Approach to Balancing Cost with Performance (<i>Robert Neumann, Eric Göltzer, Andreas Schmietendorf and Reiner Dumke</i>)</p>	<p>Analyzing Involvements of Reviewers Through Mining A Code Review Repository (<i>Junwei Liang and Osamu Mizuno</i>)</p>	<p>Measurement of JAXA's IV&V Activity Effectiveness Based on findings (<i>Ryo Ujiie, Haruka Nakao, Masafumi Katahira, Nobuyuki Hoshino and Yuko Miyamoto</i>)</p>
			<p>Approach to Introducing a Statistical Quality Control (<i>Nobuhiro Nakamura, Shinji Kusumoto, Satoru Takahashi and Kousuke Nakatsuka</i>)</p>
12:30 13:40	Lunch (70 min)		
13:40 15:10	<p>Session 2A (Full papers) 30min each Measurement Tools and Frameworks Chair: <i>Norihiro Yoshida</i></p>	<p>Session 2B (Full papers) 30min each Software Quality I Chair: <i>Masao Ohira</i></p>	<p>Session 2C (Short papers) 22min each Education and Human Factors Chair: <i>Masateru Tsunoda</i></p>
	<p>A Pluggable Tool for Measuring Software Metrics from Source Code (<i>Yoshiki Higo, Akira Saito, Goro Yamada, Tatsuya Miyake, Shinji Kusumoto and Katsuro Inoue</i>)</p>	<p>Critiquing Rules and Quality Quantification of Development-related Documents (<i>Tadashi Nagano, Yoshifumi Sakamoto, Satoshi Haraguchi, Hironori Takeuchi, Shiho Ogino and Akira Fukuda</i>)</p>	<p>A Framework for Programming Process Measurement and Compiling Error Interpretation for Novice Programmers (<i>Haruaki Tamada, Akihiro Ogino and Hirotada Ueda</i>)</p>
	<p>Service Oriented Framework for Mining Software Repository (<i>Shinsuke Matsumoto and Masahide Nakamura</i>)</p>	<p>Bidirectional Influence of Defects and Functional Size (<i>Sylvie Trudel and Alain Abran</i>)</p>	<p>Educational Issues in the Teaching of Software Measurement in Software Engineering Undergraduate Programs (<i>Monica Villavicencio and Alain Abran</i>)</p>
	<p>Benchmark-based Aggregation of Metrics to Ratings (<i>Tiago Alves, José Pedro Correia and Joost Visser</i>)</p>	<p>Enabling Analysis and Measurement of Conventional Software Development Documents Using Project-specific Formalism (<i>Taiga Nakamura, Hironori Takeuchi, Futoshi Iwama and Ken Mizuno</i>)</p>	<p>Validation of the model for prediction of the human performance (<i>Konstantina Georgieva, Robert Neumann, Anja Fiegler and Reiner Dumke</i>)</p>

			Software Metrics based on Coding Standards Violations (<i>Yasunari Takai, Takashi Kobayashi and Kiyoshi Agusa</i>)
15:10 15:40	Coffee Break (30min)		
15:40 17:10	Session 3A (Full papers) 30min each Software Cost and Effort Chair: <i>Osamu Mizuno</i>	Session 3B (Full papers) 30min each Software Quality II Chair: <i>Yoshiki Higo</i>	Session 3C (Short papers) 22min each Software Process Improvement Chair: <i>Pablo Rodriguez</i>
	Performance Evaluation of Windowing Approach on Effort Estimation by Analogy (<i>Sousuke Amasaki, Yohei Takahara and Tomoyuki Yokogawa</i>)	An Empirical Study of Fault Prediction with Code Clone Metrics (<i>Yasutaka Kamei, Hiroki Sato, Akito Monden, Shinji Kawaguchi, Hidetake Uwano, Masataka Nagura, Kenichi Matsumoto and Naoyasu Ubayashi</i>)	A process refactoring for software development with process complexity and activity priority lists (<i>Noriko Hanakawa</i>)
	Evidence-Based Evaluation of Effort Estimation Methods (<i>Cornelius Wille, Anja Fiegler, Robert Neumann and Reiner Dumke</i>)	Quantifying the Effectiveness of Testing Efforts on Software Fault Detection with a Logit Software Reliability Growth Model (<i>Hiroyuki Okamura, Yusuke Etani and Tadashi Dohi</i>)	Improve Tracking in the Software Development Projects (<i>José L. Cuadrado-García, Juan J. Cuadrado-Gallego, Miguel A. Herranz-Martínez and Pablo Rodríguez Soria</i>)
	Invited Speech: Benchmarking projects measured with COSMIC function points (<i>Harold van Heeringen</i>)	A Proposal of NHPP-based Method for Predicting Code Change in Open Source Development (<i>Hirohisa Aman</i>)	Application of GQM+Strategies® in Japanese Space Industry (<i>Tatsuya Kaneko, Masafumi Katahira, Yuko Miyamoto and Martin Kowalczyk</i>)
			An Analysis of Cost-overrun Projects using Financial Data and Software Metrics (<i>Hidetake Uwano, Yasutaka Kamei, Akito Monden and Kenichi Matsumoto</i>)
17:10	Break (20min)		
17:30 18:10	Attraction		
18:10 18:20	Award Ceremony		
18:20 19:00	Move to banquet place		
19:00	Banquet (at Nara hotel)		

November 4 – IWSM/Mensura Day 2

Start	Noh theatre (Main Hall)	Conference Room 1	Conference Room 2
9:00 9:10	Registration (at registration desk)		
9:10 10:20	Keynote 2 Measurement Impossible: How a Measure for Value Saved NASA JPL's Software Assurance Program (<i>Daniel Port</i>)		
10:20 10:30	Break (10min)		
10:30 12:00	Session 4A (Fast Abstracts) 15min each Software Analysis and Metrics Chair: <i>Yoshiki Higo</i>	Session 4B (Fast Abstracts) 15min each Project Management and Empirical Investigation Chair: <i>Hiroshi Igaki</i>	
	On Estimating Source Lines of Code from a Binary Program (<i>Takahiro Sunada, Akito Monden and Kenichi Matsumoto</i>)	An Empirical Investigation on Defect Detection in Early Stages of Development Phases (<i>Naoki Agata and Shuji Morisaki</i>)	
	Metrics for Model-Based Mutation Testing Based on Place/Transition Nets (<i>Tomohiko Takagi, Ryouzuke Takata, Zengo Furukawa, Fevzi Belli and Mutlu Beyazit</i>)	An Approach for Crowdsourcing Software Development (<i>Yuki Usui and Shuji Morisaki</i>)	
	An Empirical Analysis between Age of Code Modules and Software Defects (<i>Mahito Idehara and Osamu Mizuno</i>)	Automatic classification of user's statement in requirement specification phase (<i>Koji Toda and Kenichi Matsumoto</i>)	
	Valuation of Software Assurance Activities for Critical Software at JAXA (<i>Haruka Nakao, Dan Port, Ryo Ujiie, Yuko Miyamoto and Masa Katahira</i>)	An Approach for Selecting Focused Defect Types in Software Inspection (<i>Chikako Ogawa and Shuji Morisaki</i>)	
	Fault-prone Module Prediction By Filtering Warning Messages of Static Code Analyzer (<i>Michi Nakai and Osamu Mizuno</i>)	In-process Measurement Model with Consideration Toward Other Phase Steps in the Integration and Test Phase of Large-scale Software Development (<i>Yoshiki Mitani and Kenichi Matsumoto</i>)	
	The proposal of the Feasibility Metrics of a new Project Based on the Load-Capacity Model (<i>Takumi Kusanagi, Akinori Saito and Koichiro Ochimizu</i>)		
12:00 13:00	Lunch (60 min)		
13:00	Session 5A (Full papers)	Session 5B (Short papers)	

14:30	30min each Software Project and Business Chair: <i>Hironori Washizaki</i>	22min each Software Quality III Chair: <i>Yasutaka Kamei</i>
	Metrics Center of Excellence – From idea to implementation of a “meaningful” measurement and analysis process <i>(Vishwajit Joshi)</i>	Fault Prediction Capability of Program File’s Logical-Coupling Metrics <i>(Syed Nadeem Ahsan and Franz Wotawa)</i>
	Aligning Software Projects with Business Objectives <i>(Adam Trendowicz, Jens Heidrich and Katsutoshi Shintani)</i>	Tool-support for a Model-Centric Quality Assessment: QuaTALOG <i>(Benoît Vanderose and Naji Habra)</i>
	A Model of Project Supervision for Process Correction and Improvement <i>(Masateru Tsunoda, Akito Monden, Tomoko Matsumura and Kenichi Matsumoto)</i>	Using the COSMIC Method to Evaluate the Quality of the Documentation of Agile User Stories <i>(Jean-Marc Desharnais, Buğra Kocatürk and Alain Abran)</i>
		An Exploratory Study on the Impact of Usage of Screenshot in Software Inspection Recording Activity <i>(Tatsuya Sasaki, Shuji Morisaki and Kenich Matsumoto)</i>
14:30	Coffee Break (20min)	
14:50	Session 6A (Full papers) 30min each Software Maintenance Chair: <i>Shinsuke Matsumoto</i>	Session 6B (Short papers) 22min each Software Effort and Productivity Chair: <i>Sousuke Amasaki</i>
16:20	Sending Out a Software Operation Summary: Leveraging Software Operation Knowledge for Maintenance Tasks <i>(Henk Van Der Schuur, Slinger Jansen and Sjaak Brinkkemper)</i>	Internal and External Software Benchmark Repository Utilization for Effort Estimation <i>(Ozden Ozcan Top, Baris Ozkan, Mina Nabi, Onur Demirors and Erdir Ungan)</i>
	Using Efficient Machine-Learning Models to Assess Two Important Quality Factors: Maintainability and Reusability <i>(Hakim Lounis, Tamer Gayed and Mounir Boukadoum)</i>	Common Practices and Problems in Effort Data Collection in the Software Industry <i>(Ayşegül Özkaya, Erdir Ungan and Onur Demirörs)</i>
	Evaluation of Understandability of UML Class Diagrams by Using Word Similarity <i>(Yuto Nakamura, Kazunori Sakamoto, Kiyohisa Inoue, Hironori Washizaki and Yoshiaki Fukazawa)</i>	Analysis Results on Productivity Variation in Force.com applications <i>(Taku Fujii and Megumi Kimura)</i>
		Growth- and Entropy-based SOA Measurement – Vision and Approach in a Large Scale Environment <i>(Anja Fiegler and Reiner R. Dumke)</i>
16:20	Break (10min)	
16:30	Closing	



GESELLSCHAFT FÜR INFORMATIK E.V.
Zukunft gestalten.



BSOA 2011

6. Workshop „Bewertungsaspekte serviceorientierter Architekturen“

15. November 2011, SQS AG Köln

(<http://ivs.cs.uni-magdeburg.de~gi-bsoa>)

Agenda:

09:30 Uhr Eröffnung des Workshops

Prof. Dr. Andreas Schmietendorf – Hochschule für Wirtschaft und Recht Berlin
Eröffnung des Workshops – Zielstellungen und historischer Abriss

Wolfram Greis – Vorstandsvorsitzender der ceCMG
Grußnote zum Workshop

10:00 Uhr Session 1

PD Dr.-Ing. habil. Robert Scholderer – Privatdozent, TU Ilmenau
Eingeladener Vortrag - SLA-Management in Zeiten von Cloud-Services

10:45 Uhr Kaffeepause
Möglichkeiten zur Diskussion

11:00 Uhr Session 2 (BoF – Diskussionsrunde)

Dr. Frank Simon - Head of SQS Research & Innovation - SQS AG
BoF-Session: SOA im Spannungsfeld von Agilität und Cloud
Themenauswahl entsprechend Teilnehmerwünschen

12:30 Uhr Mittagspause
Möglichkeiten zur Diskussion und Posterpräsentationen

13:30 Uhr Session 3

Harry M. Sneed ANECON GmbH, Universität Regensburg, FH Hagenberg
Eine Evolutionsstrategie für Service-orientierte Architekturen

Victor Czenter – SQS AG Köln
Vom SOA-Perfomancetesten zum Cloud-Perfomancetesten

Frederik Kramer, Naoum Jamous - Otto-von-Guericke-Universität Magdeburg
Towards ontology driven information systems – the OEPI example

15:00 Kaffeepause

Möglichkeiten zur Diskussion und Posterpräsentationen

15:30 Uhr Session 4

Anja Fiegler – T-Systems International GmbH

Bewertung von SOA Qualität anhand wachstums- und entropiebasierter Messmethoden

David Endler - Stuttgart

Release Management von Cloud-Lösungen ...

Florian Muhss - Hochschule für Wirtschaft und Recht Berlin

Industrialisierung von SaaS – Status Quo und künftige Anforderungen

17:00 Workshop-Abschluss und Ausblick

Posterpräsentationen in den Pausen ausgewählt:

Marcus Zieger – Hochschule für Technik und Wirtschaft Berlin

Möglichkeiten ereignisorientierter Ansätze im Umfeld serviceorientierter Lösungen

Mandy Mälzer – OvG-Universität Magdeburg

Produkt- und Servicemodellierung mit Hilfe von Ontologien

Naoum Jamous, Frederik Kramer et al. - OvG-Universität Magdeburg

Deploying OEPI ontology into the “LWC-EPI” system



Fachhochschule für
Wirtschaft Berlin
Berlin School of Economics





Metrikon 2011

17.-18. November 2011

Fraunhofer IESE, Kaiserslautern

(www.metrikon.de)

Programm:

Michael Stupperich (Daimler AG):

Messen und Bewerten beim Entwickeln von Embedded Software: Erfahrungen aus der industriellen Praxis

Luigi Buiglione Engineering.IT SpA, Christof Ebert (Vector Consulting):

Estimation Tools - An Overview

Frank Elberzhager, Jürgen Münch (IESE):

Using Early Quality Assurance Metrics to Focus Testing Activities

Thomas M. Fehlmann (Euro Project AG Zürich):

Eberhard Kranich (T-Systems):

COSMIC Functional Sizing based on UML Sequence Diagrams

Thomas M. Fehlmann (Euro Project AG Zürich):

Understanding Business Drivers for Software Products from Net Promoter Score Surveys

Anja Fiegler, Reiner R. Dumke (Uni Magdeburg):

Measurement of favorable characteristics in SOA and Cloud Computing

Andrea Herrmann (Infoman AG):

Wiederholbarkeit der Schätzung von IT-Risiken

André Janus, Reiner R. Dumke (Uni Magdeburg):

Auf dem Weg zu einem allgemeinen Agilen Software Entwicklungs- und Vorgehensmodell (ASDM)

André Janus, Reiner R. Dumke (Uni Magdeburg):

Continuous Integration, Continuous Measurement, Continuous Improvement - Wie Metriken helfen die interne Qualität in einem agilen Wartungs- und Weiterentwicklungsprojekt sicherzustellen

Martin Kowalczyk (IESE):

Aligning Software Processes with Organizational Purpose using a Measurement-based Approach

Roland Neumann (Continental Temic GmbH):

Vermeidung nur der teuren Fehler: Aufwandsgewichtete Fehlerprognose

Stavros Pechlivanidis (IBM Deutschland):

Improve expert estimates

Andreas Schmietendorf (FHW Berlin), Robert Neumann, Reiner Dumke (Uni Magdeburg):

ERP-Festpreisprojekte im Kontext einer zunehmend industrialisierten Bereitstellung von IT-Lösungen

Binish Tanveer, Axel Wickenkamp, Martin Blersch (FZI):

Dynamic Identification, Extraction and Reuse of Software Components in Distributed Development Scenarios

Wolfgang Kuhl (Cornelius Wille, Reiner Dumke, Christian Haug, Renè Gröschke (Cassidian/EADS):

Einsatz von Deployment Metriken im Umfeld des Continuous Delivery Prozesses

Konstantina Georgieva, Robert Neumann, Reiner R. Dumke (Uni Magdeburg):

Failure Mode and Effect Analysis for the software team capabilities

Martin Kunz (bild.de), Reiner R. Dumke:

Metrikenbasierter Reviewprozess in der agilen Softwareentwicklung

Keynote:

Andreas Zeller (Universität Saarbrücken)

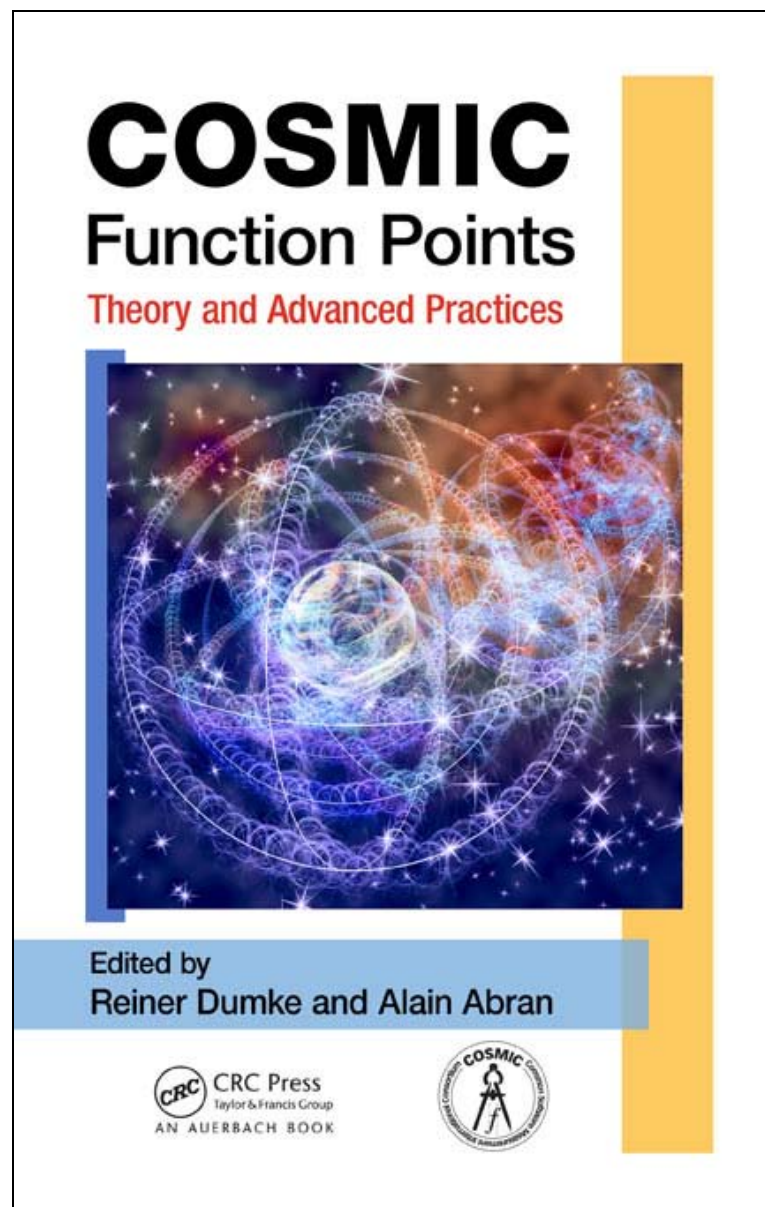
Dumke, R.; Abran, A.:

Cosmic Function Points

Theory and Advanced Practices

CRC Press Taylor & Francis Group, 2011 (334 Seiten)
ISBN: 978-1-4398-4486-1

This book has the following characteristics: the theme is about a new software size estimation method including their scientific and practical background; the chapters are based on papers, that would be published in our conference proceedings during the last six years; the authors are wellknown participants of the international software measurement community (see e. g. COSMIC, IFPUG etc.) and the book content is structured in the main problems of building new measurement or estimation methods in general and should be interesting for the software quality.



Abran, A.; Büren, G.; Dumke, R.R.; Cuadrado-Callego, J.J.; Münch, J.:

Applied Software Measurement

***Proceedings of the joined International Conferences on Software Measurement
IWSM/MetriKon/Mensura 2010, 10.-12. November 2010, Stuttgart***

Shaker Verlag, Aachen, 2010 (646 Seiten)

ISBN 978-3-8322-9618-6

ISSN 1618-7946

The book includes the proceedings of the IWSM/MetriKon/Mensura 2010 held in Stuttgart in November 2010, which constitute a collection of theoretical studies in the field of software measurement and case reports on the application of software metrics in companies and universities.

The contents are described by the listing of the paper abstracts in this Measurement News.

Schmietendorf, A.; Bartsch, C.; Dumke, R.R.:

BSOA 2010

5. Workshop Bewertungsaspekte serviceorientierter Architekturen

9. November 2010, Karlsruhe

Shaker Verlag, Aachen, 2010 (122 Seiten)

ISBN 978-3-8322-9313-0

ISSN 1867-7088

Seit nunmehr 5 Jahren beschäftigt sich die BSOA-Initiative mit der Bewertung von serviceorientierten Architekturansätzen. Zunächst beschäftigten sich die Teilnehmer im Rahmen der ersten Workshops mit der messtechnischen Erfassung der mit einer SOA einhergehenden Ausprägungen und Merkmale bzw. den involvierten Stakeholdern. Sehr schnell wurde deutlich, dass sich eine SOA weniger auf technologische Sachverhalte bezieht als vielmehr auf die veränderte Sichtweise zur Gestaltung unternehmensweit genutzter IT-Systeme. Erwartete Vorteile einer SOA bezogen sich insbesondere auf die Zielstellungen des Informationsmanagements. In diesem Zusammenhang wurden Mehrwertpotentiale durch eine verbesserte Geschäftsprozessorientierung der IT, reduzierte Daten- und Funktionsredundanzen, verringerte Komplexitäten bei Anwendungen und Schnittstellen, verringerte Kundenbindungen oder auch die Flexibilität mit der eine benötigte IT-Lösung bereitgestellt werden kann, ausgemacht.

Aus der Vielzahl an eingereichten Beiträgen konnte durch das Programmkomitee eine anspruchsvolle Agenda zusammengestellt werden. Ausgewählt wurden 6 Beiträge für eine Präsentation während der Workshopsitzungen und 3 Beiträge für Posterpräsentationen während der Pausenzeiten.

Schmietendorf, A.:

5. Hochschul-Roundtable der CECMG/DASMA

Industrielle und gesellschaftliche Herausforderungen beim flexiblen Sourcing von IT-Projekten/-Dienstleistungen

Shaker Verlag, Aachen, 2010 (82 Seiten)

ISBN 978-3-8322-8940-9

Das Buch fasst die einzelnen Diskussionsbeiträge vornehmlich aus dem industriellen Umfeld zusammen und stellt auch aktuelle Forschungsansätze zu diesem Themengebiet vor.

Dumke, R.; Mencke, S.; Wille, C.:

Quality Assurance of Agent-Based and Self-Managed Systems

CRC Press Taylor & Francis Group, 2010 (154 Seiten)

ISBN 978-1-4398-1266-2

The challenges in implementing intelligent and autonomous software systems remain to be the development of self-adapting systems, self-healing applications. Corporate global creation, and collaborated robotic teams. With software agent technology widely recognized as a key approach in implementing such global infrastructure, the importance of the role of quality assurance of agent-based systems and system development is growing daily.

Based on the author's more than 15 years of experience in software agent technology, **Quality Assurance of Agent-Based and Self-Managed Systems** presents the basic principles and structures of agent technology. It covers the main quality issues of software system development and provides examples of agent measurement and evaluation. The authors focus on software agent systems and multiagent systems (MAS) and discuss the determination of quality properties. They also explain different techniques and approaches used to evaluate the development of MAS. The final chapter summarizes quality assurance approaches for agent-based systems and discusses some open problems and future directions.

Although often complex and difficult to manage, the applications for software agent systems in essential life systems in crease every day. Since the quality of the agent-based self-managing systems is a central point of software risk; analyzing, evaluating, and improving the quality measurement situation will always be a concern when developing these systems. With more than 60 illustrations and 20 tables, this book builds a foundation in quality and quality for agent-based technology.

Abran, A.:

Software Metrics and Software Metrology

IEEE Computer Society Publ., 2010 (328 Seiten)

ISBN 978-0-470-59720-0

Software Metrics and Software Metrology looks at the fundamentals of the design of a measurement method, which forms the foundation of the measures available in the sciences and in engineering. Alain Abran provides a step-by-step approach to both analyzing the design of current software measures and designing new, robust software measures for a specific business or engineering need. He draws upon years of experience to ensure that software engineers and managers will apply the best practices in software measurement - and therefore be equipped to respond to the most demanding customers and feel supported by senior executives.

- Presents the key concepts that dictate whether a software measure's design is sufficiently strong.
- Features several case studies analyzing strengths and weaknesses in the design of some of the software measures most widely used or quoted.
- Describes how lessons learned led to the design of the COSMIC - ISO 19761 method for the measurement of the functional size of software, from its initial prototype to its adoption by the ISO as an international standard.
- Illustrates day-to-day software measurement issues that have not been seriously addressed, from convertibility across measurement designs to measurement standard etalons.
- Includes chapter exercises for classroom use.

Software Metrics and Software Metrology is meant for software quality specialists and process improvement analysts and managers, in software organizations of all sizes. In addition, this book introduces many of the theoretical concepts and references needed by professionals, managers, and students to help them understand the fundamentals of the identification and evaluation of software development and maintenance processes, as well as improvements to them.

Jones, C.:

Software Engineering Best Practices

Lessons from Successful Projects in the Top Companies

McGraw-Hill Companies, 2010 (660 Seiten)

ISBN 978-0-07-162161-8

This in-depth volume examines software engineering topics that are not covered elsewhere: the question of why software engineering has developed more than 2,500 programming languages; problems with traditional definitions of software quality; and problems with common metrics, "lines of code", and "cost per defect" that violate standard economic assumptions. The book notes that a majority of "new" projects are actually replacements for legacy applications, illustrating that data mining for lost

requirements should be a standard practice. Difficult social engineering issues are also covered, such as how to minimize harm from layoffs and downsizing.

Software Engineering Best Practices explains how to effectively plan, size, schedule, and manage software projects of all types, using solid engineering procedures. It details proven methods, from initial requirements through 20 year of maintenance. Portions of the book have been extensively reviewed by key engineers from top companies, including IBM, Microsoft, Unisys, and Sony.

Humphrey, W.S.; Thomas, W.R.:

Reflections on Management

How to Manage Your Software Projects, Your Teams, Your Boss, and Yourself

Addison-Wesley, 2010 (288 Seiten)

ISBN-10: 0-321-71153-X

ISBN-13: 978-0-321-71153-3

This book, drawn from Humphreys books, articles, and columns, comprises a collection of advice, stories, and hard-earned wisdom, rather than specific instruction on how to implement the PSP or TSP (which are thoroughly covered in Humphreys book on those specific subjects). What emerges for the reader is an understanding that successful software project management is a journey with many obstacles. To succeed, engineers must manage more than their projects. They must use their own experience and that of their teams to first understand and then plan the project ahead. They must influence their teams' attitudes and methods for doing disciplined work. And they must persuade their bosses to set aside ill-informed notions of schedules and resource commitments and look instead at hard, historical data.

The essays in Part I provide insights on types of plans and the planning process. Part II covers team building and motivation. Part III describes how to work with your managers and persuade them to use best practices. And Part IV examines your personal responsibilities, commitments, and processes.

These essays shine a light on the challenges inherent in software development and can set engineers on the road to understanding how to succeed. And while Humphreys particular expertise is software, practitioners in every field of business will benefit from the wisdom and advice contained here.

Chemuturi, M.:

Software Estimation Best Practices, Tools & Techniques

A Complete Guide for Software Project Estimators

J. Ross Publishing, 2009 (298 Seiten)
ISBN 978-1-60427-024-2

Software Estimation Best Practices, Tools & Techniques covers all facets of software estimation. It provides a detailed explanation of the various methods for estimating software size, development effort, cost, and schedule, including a comprehensive explanation of test effort estimation. This unique desk reference, for the novice to expert, also offers direction on which methods are most appropriate for each of the different software project types commonly executed and criteria for selecting software estimation tools.

- Presents software estimation best practices and shows how to avoid common pitfalls.
- Demonstrates a practical methodology with templates for using Delphi estimation and analogy-based estimation for software projects.
- Introduces a new method referred to as software size units for measuring software size that does not make use of the untenable concept of "complexity" for adjusting software size.
- Provides useful methods for converting software size to effort, deriving true productivity, and analyzing variances between actual and estimated values as a tool for productivity improvement.
- WAV offers a free downloadable test effort estimation tool (TPPal), a software size unit estimation tool (SSUPal), and a 180-day demo for a comprehensive estimation tool known as EstimatorPal - available from the Web Added Value™ Download Resource Center at www.jrosspub.com.

QEST 2011:

6th International Conference on Quantitative Evaluation of SysTems
September 5-8, 2011, Aachen, Germany
see: <http://www.qest.org/qest2011>

ASQT 2011:

Arbeitskonferenz Softwarequalität und Test
September 28-30, 2011, Graz, Austria
see: <http://www.asqt.org/>

CONQUEST 2011:

12. International Conference on Software Quality
September , 2011, Nuremberg, Germany
see: <http://www.conquest-conference.org/>

ESEM 2011:

5th International Symposium on Empirical Software Engineering & Measurement
September 22-23, 2011, Alberta, Canada
see: <http://esem.cpsc.ucalgary.ca/esem2011/index.html>

UKSMA 2011:

20th Annual UKSMA Conference - Managing your Software (through Measurement)
October 27-28, 2011, London, UK
see: <http://www.ukσμα.co.uk/>

IWSM/Mensura 2011:

Common International Conference on Software Measurement
November 2-4, 2011, Nara, Japan
see: <http://mensura.wordpress.com/>

BSOA 2011:

6. Workshop Bewertungsaspekte service-orientierte Architekturen
November 15, 2011, SQS, Cologne, Germany
see: <http://www-ivs.cs.uni-magdeburg.de/~gi-bsoa/>

MetriKon 2011:

Common international Conference on Software Measurement
November 16-18, 2011, IESE, Kaiserslautern, Germany
see: <http://iws2010.cs.uni-magdeburg.de/cfp2011.htm>

SWQD 2012:

Software Quality Days
January 17-19, 2012, Vienna, Austria
see: <http://www.software-quality-days.at/>

see also: OOIS, ECOOP and ESEC European Conferences

Other Information Sources and Related Topics

- **<http://rbse.jsc.nasa.gov/virt-lib/soft-eng.html>**
Software Engineering Virtual Library in Houston
- **<http://www.mccabe.com/>**
McCabe & Associates. Commercial site offering products and services for software developers (i. e. Y2K, Testing or Quality Assurance)
- **<http://www.sei.cmu.edu/>**
Software Engineering Institute of the U. S. Department of Defence at Carnegie Mellon University. Main objective of the Institute is to identify and promote successful software development practices.
Exhaustive list of publications available for download.
- **<http://dxsting.cern.ch/sting/sting.html>**
Software Technology Interest Group at CERN: their WEB-service is currently limited (due to "various reconfigurations") to a list of links to other information sources.
- **<http://www.spr.com/index.htm>**
Software Productivity Research, Capers Jones. A commercial site offering products and services mainly for software estimation and planning.
- **<http://www.qucis.queensu.ca/Software-Engineering/>**
This site hosts the World-Wide Web archives for the USENET usegroup comp.software-eng. Some links to other information sources are also provided.
- **<http://www.esi.es/>**
The European Software Institute, Spain
- **<http://www.lrgl.uqam.ca/>**
Software Engineering Management Research Laboratory at the University of Quebec, Montreal. Site offers research reports for download. One key focus area is the analysis and extension of the Function Point method.
- **<http://www.SoftwareMetrics.com/>**
Homepage of Longstreet Consulting. Offers products and services and some general information on Function Point Analysis.
- **<http://www.utexas.edu/coe/sqi/>**
Software Quality Institute of the University of Texas at Austin. Offers comprehensive general information sources on software quality issues.
- **<http://www.trese.cs.utwente.nl/~vdberg/thesis.htm>**
Klaas van den Berg: Software Measurement and Functional Programming (PhD thesis)
- **<http://divcom.otago.ac.nz:800/com/infosci/smrl/home.htm>**
The Software Metrics Research Laboratory at the University of Otago (New Zealand).

- <http://ivs.cs.uni-magdeburg.de/sw-eng/us/>
Homepage of the Software Measurement Laboratory at the University of Magdeburg.
- <http://www.cs.tu-berlin.de/~zuse/>
Homepage of Dr. Horst Zuse
- <http://dec.bournemouth.ac.uk/ESERG/bibliography.html>
Annotated bibliography on Object-Oriented Metrics
- <http://www.iso.ch/9000e/forum.html>
The ISO 9000 Forum aims to facilitate communication between newcomers to Quality Management and those who have already made the journey have experience to draw on and advice to share.
- <http://www.qa-inc.com/>
Quality America, Inc's Home Page offers tools and services for quality improvement. Some articles for download are available.
- <http://www.quality.org/qc/>
Exhaustive set of online quality resources, not limited to software quality issues
- <http://freedom.larc.nasa.gov/spqr/spqr.html>
Software Productivity, Quality, and Reliability N-Team
- <http://www.qsm.com/>
Homepage of the Quantitative Software Management (QSM) in the Netherlands
- <http://www.iese.fhg.de/>
Homepage of the Fraunhofer Institute for Experimental Software Engineering (IESE) in Kaiserslautern, Germany
- <http://www.highq.be/quality/besma.htm>
Homepage of the Belgian Software Metrics Association (BeSMA) in Keebergen, Belgium
- http://www.cetus-links.org/oo_metrics.html
Homepage of Manfred Schneider on Objects and Components
- <http://dec.bournemouth.ac.uk/ESERG/bibliography.html>
An annotated bibliography of object-oriented metrics of the Empirical Software Engineering Research Group (ESERG) of the Bournemouth University, UK

News Groups

- news:comp.software-eng
- news:comp.software.testing
- news:comp.software.measurement

Software Measurement Associations

- **<http://www.dasma.org>**
DASMA Deutsche Anwendergruppe für SW Metrik und Aufwands-schätzung e.V.
- **<http://www.aemes.fi.upm.es>**
AEMES Association Espanola de Metricas del Software
- **<http://www.cosmicon.com>**
COSMIC Common Software Measurement International Consortium
- **<http://www.esi.es>**
ESI European Software Engineering Institute in Bilbao, Spain
- **<http://www.mai-net.org/>**
Network (MAIN) Metrics Associations International
- **<http://www.sttf.fi>**
FiSMA Finnish Software Metrics Association
- **<http://www.iese.fhg.de>**
IESE Fraunhofer Einrichtung für Experimentelles Software Engineering
- **<http://www.isbsg.org.au>**
ISBSG International Software Benchmarking Standards Group, Australia
- **<http://www.nesma.nl>**
NESMA Netherlands Software Metrics Association
- **<http://www.sei.cmu.edu/>**
SEI Software Engineering Institute Pittsburgh
- **<http://www.spr.com/>**
SPR Software Productivity Research by Capers Jones
- **<http://fdd.gsfc.nasa.gov/seltext.html>**
SEL Software Engineering Laboratory - NASA-Homepage
- **<http://www.vrz.net/stev>**
STEV Vereinigung für Software-Qualitätsmanagement Österreichs
- **<http://www.sqs.de>**
SQS Gesellschaft für Software-Qualitätssicherung, Germany
- **<http://www.ti.kviv.be>**
TI/KVIV Belgish Genootschap voor Software Metrics
- **<http://www.ukσμα.co.uk>**
UKSMA United Kingdom Software Metrics Association

Software Metrics Tools (Overviews and Vendors)**Tool Listings**

- <http://www.cs.umd.edu/users/cml/resources/cmmetrics/>
C/C++ Metrics Tools by Christopher Lott
- <http://mdmetric.com/>
Maryland Metrics Tools
- <http://cutter.com/itgroup/reports/function.html>
Function Point Tools by Carol Dekkers
- <http://user.cs.tu-berlin.de/~fetcke/measurement/products.html>
Tool overview by Thomas Fetcke
- <http://zing.ncsl.nist.gov/WebTools/tech.html>
An Overview about Web Metrics Tools

Tool Vendors

- <http://www.mccabe.com>
McCabe & Associates
- <http://www.scitools.com>
Scientific Toolworks Inc.
- <http://zing.ncsl.nist.gov/webmet/>
Web Metrics
- <http://www.globalintegrity.com/csheets/metself.html>
Global Integrity
- <http://www.spr.com/>
Software Productivity Research (SPR)
- <http://jmetric.it.swin.edu.au/products/jmetric/>
JMetric
- <http://www.imagix.com/products/metrics.html>
Imagix Power Software
- <http://www.verilogusa.com/home.htm>
VERILOG (LOGISCOPE)
- <http://www.qsm.com/>
QSM

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