

2016 IEEE 8th International Workshop on Managing Technical Debt (MTD 2016)

**Raleigh, North Carolina, USA
4 October 2016**



**IEEE Catalog Number: CFP1684S-POD
ISBN: 978-1-5090-3855-8**

**Copyright © 2016 by the Institute of Electrical and Electronics Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1684S-POD
ISBN (Print-On-Demand):	978-1-5090-3855-8
ISBN (Online):	978-1-5090-3854-1

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2016 IEEE 8th International Workshop on Managing Technical Debt

MTD 2016

Table of Contents

Message from the Chairs.....	vi
Workshop Committees.....	vii
Keynote: 50 Years of Technical Debt with Rising Interest Rates.....	viii

Session 1: Technical Debt in Different Domains

How “Specification by Example” and Test-Driven Development Help to Avoid Technical Debt	1
<i>Wolfgang Trumler and Frances Paulisch</i>	
The Perception of Technical Debt in the Embedded Systems Domain: An Industrial Case Study	9
<i>Areti Ampatzoglou, Apostolos Ampatzoglou, Alexander Chatzigeorgiou, Paris Avgeriou, Pekka Abrahamsson, Antonio Martini, Uwe Zdun, and Kari Systs</i>	
Database Design Debts through Examining Schema Evolution	17
<i>Mashel Al-Barak and Rami Bahsoon</i>	

Session 2: Analyzing Technical Debt

Towards Assessing the Technical Debt of Undesired Software Behaviors in Design Patterns	24
<i>Derek Reimanis and Clemente Izurieta</i>	
Technical Debt Indexes Provided by Tools: A Preliminary Discussion	28
<i>Francesca Arcelli Fontana, Riccardo Roveda, and Marco Zanoni</i>	
Practical Technical Debt Discovery by Matching Patterns in Assessment Graph	32
<i>Andriy Shapochka and Borys Omelayenko</i>	
Adjusting the Balance Sheet by Appending Technical Debt	36
<i>Shirin Akbarinasaji and Ayse Bener</i>	
Author Index	40