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Nota di contenuto	""Foreword""; ""Preface""; ""Conference Organization""; ""Contents""; ""Part I Invited and Regular Papers""; ""Model Checking of Energy Consumption Behavior""; ""1 Introduction""; ""2 Model-Based Analysis""; ""2.1 Energy Consumption Behavior""; ""2.2 Energy Consumption Properties""; ""3 Behavioral Model""; ""3.1 Power Consumption Automaton""; ""3.2 Operational Semantics""; ""4 Property Specification""; ""4.1 Syntax""; ""4.2 Semantics""; ""5 Model Checking""; ""6 Related Work""; ""7 Conclusion""; ""References"" ""UNISENSE: A Unified and Sustainable Sensing and Transport Architecture for Large Scale and Heterogeneous Sensor Networks""""1 Introduction""; ""1.1 Background""; ""1.2 Motivation""; ""1.3

Contributions"; "1.4 Organization of the Paper"; "2 The UNISENSE Architecture"; "2.1 Overview"; "2.2 Application Profiling"; "2.3 Node Architecture"; "2.4 Intelligent Network Design"; "2.5 Network Management and Visualization"; "2.6 Deep Sensing"; "2.7 Generalized Participatory Sensing"; "2.8 Security, Privacy, and Trust"; "3 Case Studies"; "3.1 Urban Noise Monitoring"; "3.2 Public Infrastructure Monitoring (Smart Bins)"; "3.3 Event Management (CuteBit)"; "3.4 Vertical Farming Monitoring"; "3.5 Practical Issues and Lessons Learnt"; "4 Related Work and Competitive Advantages"; "5 Conclusion and Ongoing Work"; "References"; "Black-Box Optimization of Lighting Simulation in Architectural Design"; "1 Introduction"; "2 Application to Architectural Design"; "3 The Radial Basis Function Method"; "3.1 Selection of the Initial Points"; "3.2 Selection of the Next Evaluation Point"; "3.3 Extensions"; "3.4 Open-Source Implementation"; "References"; "Aligning Cyber-Physical System Safety and Security"; "1 Introduction"; "2 Related Work"; "2.1 CPS Safety"; "2.2 CPS Security"; "2.3 Safety and Security Integration"; "3 Integrated CPS Safety and Security Lifecycle Process"; "4 CPS Safety and Security Alignment Using Failure Attack-Countermeasure Graph"; "5 FACT Graph Example"; "6 Conclusions"; "References"; "Singapore Road Vehicle Fleet Evolution"; "1 Introduction"; "2 Model Structure and Data Source"; "3 Building Blocks of Fleet Model"; "3.1 New Registration of Motor Vehicles"; "3.2 Survival Rate and Lifetime Distribution"; "3.3 Vehicle Kilometers Travelled (VKT)"; "3.4 Vehicle Fuel Use"; "3.5 Greenhouse Gas (GHG) Emissions"; "4 Model Findings"; "5 Future Work"; "6 Conclusions"; "References"; "Design and Management of Flexible On-Shore LNG Production Engineering Systems"; "1 Introduction"; "2 Background and Motivation"; "2.1 Flexibility in Engineering Design"; "2.2 Simulation Based Flexibility Analysis"; "2.3 LNG Production System Design"; "3 Scope and Problem Definition"; "4 Methodology"; "4.1 Step 1: Deterministic Analysis"

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## Sommario/riassunto

This book contains all refereed papers that were accepted to the first edition of the Asia-Pacific conference on « Complex Systems Design & Management » (CSD&M Asia 2014) that took place in Singapore from December 10 to December 12, 2014 (Website: <http://www.2014.csdm-asia.net/>). These proceedings cover the most recent trends in the emerging field of Complex Systems, both from an academic and a professional perspective. A special focus is put on Designing Smart cities. The CSD&M Asia 2014 conference is organized under the guidance of the Center of Excellence on Systems Architecture, Management, Economy and Strategy, CESAMES, non-profit organization, address: CESAMES, 8 rue de Hanovre, 75002 Paris, France ( Website : <http://www.cesames.net/en>).

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