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Nota di contenuto	""Preface ""; ""Conference Organization ""; ""Contents ""; ""When Systems Engineering Meets Software Language Engineering""; ""1 A Language-Oriented Vision for Systems Engineering""; ""2 Challenges for SLE from Language Designersa€? Point of View""; ""3 Challenges for SLE from the Language Usersa€? Point of View""; ""4 Conclusion and Perspectives""; ""References""; ""Dependency Analysis as a Heat Map for Architecture Standardization""; ""1 Initial Situation and Outline of Paper""; ""2 Objective""; ""3 Approach""; ""4 Use Case""; ""5 Conclusion and Future Work""; ""References""

""User-Based Solutions for Increasing Level of Service in Bike-Sharing Transportation Systems""1 Introduction""; ""2 Presentation of the Model""; ""3 Results""; ""4 Discussion""; ""5 Conclusion""; ""References""; ""A New Framework for the Simulation of Offshore Oil Facilities at the System Level""; ""1 Introduction""; ""2 Acausal and Hybrid Modeling""; ""3 Physics Modeling""; ""4 Risk Modeling""; ""5 Framework""; ""6 Conclusion and Perspectives""; ""References""  
 ""Towards an Extended Interoperability Systemic Approach for Dynamic Manufacturing Networks: Role and Assessment of PLM1 Standards""1 Introduction""; ""2 SIP Related Work""; ""3 Systemic and Its Limitations for a Global Interoperable PLM Approach""; ""4 Illustration through ISA95 Case Study""; ""5 Conclusion and Way Forward""; ""References""; ""Flexible Queries over Engineering Data""; ""1 Introduction""; ""2 Queries and Rules on Engineering Data""; ""3 Requirements from Flexible Queries""; ""4 A Visual Query Formalism""; ""5 Semantics""; ""6 Implementation""; ""7 Conclusion""  
 ""References""""Leveraging Domain Expertise 1 in Architectural Exploration ""; ""1 Introduction""; ""2 Engineering Complex Systems with Architecture Patterns""; ""3 Architecture Patterns a€? Example Use Case""; ""4 Integration Framework""; ""5 Architecture Optimization""; ""6 Summary and Future Directions""; ""References""; ""Seven Issues on Distributed Situation Awareness Measurement in Complex Socio-technical Systems""; ""1 Introduction""; ""2 Previous Work""; ""3 Why It Is Not Worthy to Combine the Existing SA Measurement Techniques""; ""4 Issues on DSA Measurement""; ""5 Conclusion""  
 ""References""""The Hidden Perils of Addressing Complexity with Formal Process a€? A Philosophical and Empirical Analysis""; ""1 Introduction""; ""2 Complexity and the Rise of Formal Quality Control Processes""; ""3 Formal Process as Technology""; ""4 Formal Process and Labor Study Literature""; ""5 Research Question""; ""6 Research Method""; ""7 Analysis""; ""8 Conclusion""; ""References""; ""A Formal Foundation of Systems Engineering""; ""1 Introduction""; ""2 What Is Necessary for an Adequate Formalization of Systems Engineering?""; ""3 Formal Introduction of the Framework""  
 ""4 Concluding Remarks""

## Sommario/riassunto

This book contains all refereed papers that were accepted to the fifth edition of the « Complex Systems Design & Management » (CSD&M 2014) international conference which took place in Paris (France) on the November 12-14, 2014. These proceedings cover the most recent trends in the emerging field of complex systems sciences & practices from an industrial and academic perspective, including the main industrial domains (aeronautic & aerospace, transportation & systems, defense & security, electronics & robotics, energy & environment, health & welfare services, software & e-services), scientific & technical topics (systems fundamentals, systems architecture & engineering, systems metrics & quality, systemic tools) and system types (transportation systems, embedded systems, software & information systems, systems of systems, artificial ecosystems). The CSD&M 2014 conference is organized under the guidance of the CESAMES non-profit organization, address: CESAMES, 8 rue de Hanovre, 75002 Paris, France.