During the last years, there has been a growing interest around the development of new ideas envisioning the opportunities of combining Internet and Services. The “Future Internet” (FI) concept has been introduced and it is now central to several initiatives.

Specifically, with respect to the Internet of Services, many research communities refer to the well-founded Service-Oriented Computing (SOC) as the reference paradigm for FI computing. SOC promotes the idea of assembling application services into a network of services that can be loosely coupled to create flexible, dynamic business processes and agile software systems, which span organizations and computing platforms.

Service Composition approaches will certainly have an important role in shaping the SOC within the vision of FI. Despite the great interest in Service Composition, no common foundations and principles have been established yet for the FI of Services. Developing FI applications encompasses a variety of aspects, ranging from modeling and analysis issues in the early phases of their development, to issues related to their implementation and run-time management.

This JISA Thematic Series aims at providing innovative contributions to the research and development of novel Service Composition approaches to assist the design, development, validation and execution of service-oriented applications for the FI.

Topics include, but are not limited to the following:

Service Composition Methods and Practices for FI applications
- Engineering Principles
- Development Processes
- Requirement Elicitation and Analysis
- Design and Programming
- Verification and Validation
- Model-Driven Development Methods and Tools

Run-Time Support for Composing Services in the FI
- Middleware (description, publication, discovery, access, etc.)
- Convergence and Integration of Centralized and/or Decentralized Approaches
- Support for Scalability, Mobility, Heterogeneity

Quality of FI Service Compositions
- Performance, Reliability and Availability Modeling and Evaluation
- Security (vulnerabilities, malwares, countermeasures, etc.)
- Trust and Privacy
- Sustainability

FI Crosscutting Concerns
- Pervasiveness
- Context- and Resource-awareness
- Semantic-awareness
- Seamlessness
- Adaptation
- Decentralized vs. Centralized Service Composition Approaches
Tools, Case studies, Use cases
- Smart grid, Smart house, Smart cities, Sustainable and Green systems
- FI Killer applications

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