Modern organizations, in the era of internet and web-based scenarios, have started to experience networked collaboration by information and knowledge sharing in order to improve business process, to extend business knowledge and to collaborate with all potential partners, to share and access the huge number of available resources over the network. New requirements for Information and Knowledge Management Systems must be considered in such distributed collaboration scenario. Specifically, advanced methods and tools for semantic interoperability, integration support and dynamic collaboration are strongly required. This section aims at presenting the latest research on information and knowledge management and collaboration in modern organizations. The section serves as a forum for researchers, practitioners, and users to exchange new ideas and experiences on the ways new technologies (e.g., semantic web, semantic web services, service oriented architectures, P2P networks, OLAP systems, tools for data and service integration, information wrapping and extraction, data mining, process mining) may contribute to extract, represent and organize knowledge as well as to provide effective support for collaboration, communication and sharing of information and knowledge.

Six contributions look into Information and Knowledge Management from different perspectives, and along different dimensions in various domains of discourse. Two papers discuss advanced methods and tools in the areas of – respectively – spatio-temporal data mining and datawarehouse design. Alessia Albanese and Alfredo Petrosino, in “A Non Parametric Approach to the Outlier Detection in Spatio-Temporal Data Analysis”, consider real-world knowledge discovery and data mining applications and propose a non parametric method based on a new fusion approach able to discover outliers according to spatial and temporal features. In “Thinking Structurally Helps Business Intelligence Design”, Claudia Diamantini and Domenico Potena present a semantic model of Key Performance Indicators and discuss how this representation can help in different phases of the design activity, like requirements elicitation and datawarehouse design.

Two papers address relevant issues in the area of knowledge integration and sharing. Devis Bianchini, Valeria de Antonellis, Michele Melchiori, in “A Semantic Framework for collaborative Enterprise Knowledge Mashup”, propose a design framework for interactive selection and proactive suggestion of components for
mashup development in the context of collaborative enterprises. Silvana Castano, Alfio Ferrara, Stefano Montanelli, in “Similarity-based Classification of Microdata” present a similarity-based approach for microdata classification based on tag-oriented matching techniques, characterized by semantic and social information carried by microdata tag equipments.

Finally, two papers look into techniques and tools for effective exploitation of – respectively – metadata and linguistic knowledge for cost analysis and reduction. In “The Value of Business Metadata – Structuring the Benefits in a Business Intelligence Context”, Daniel Stock and Robert Winter contribute to a structured analysis of the benefits of Business Metadata by proposing a framework of qualitative and quantitative benefit dimensions, useful for pragmatic cost-benefit analysis. Ernesto D’Avanzo, Tsvi Kuflik, Annibale Elia, in “Online Advertising Using Linguistic Knowledge”, present a methodology that, while exploiting linguistic knowledge, identifies bid keyword in the long tail distribution. The proposed approach reduces the cost of an advertising campaign.