Open Source Software (OSS) is a multi-faceted phenomenon which has undergone a transformation from its roots as a sub-cultural ideological movement to a matter of strategic importance – technologically and commercially – for many firms. Both public and private organisations are adopting OSS products to support their activities; are using OSS frameworks, tools and methods to build new systems in an agile, rapid and economically efficient manner; and are adopting OSS licensing structures to leverage the power of community-based development, promote particular platforms and standards, grow market- and mind-share, steward public funds responsibly, and for a variety of other reasons.

As part of this transformation, many of the characteristics of OSS have evolved. For example, while early OSS activity primarily addressed generic infrastructural software (e.g. operating systems, internet networking), more recent projects increasingly address the end-user (e.g. productivity, web browsing) and specialised vertical (e.g. ERP, e-Health) domains. Similarly, the methods and tools employed by OSS developers have become increasingly formalised and complex, due partly to the increasing involvement of traditional software-production firms like Sun and IBM. The business strategies and business models associated with OSS have become increasingly sophisticated, involving the balancing of various forms of IPR in the form of hybrid-business models, a growing reliance on inter-organisational and network based business dynamics, and the maintenance of delicate relationships with OSS developer and user communities.

OSS is a living phenomenon and its evolution is by no means complete. The goal of this panel, therefore, is to support a lively open discussion on the “Grand Challenges for Open Source Software” facing various OSS stakeholders in the early 21st century. The panellists will stimulate discussion by briefly presenting 12 key challenges facing the professional, research and OSS developer/user communities as the OSS phenomenon continues to grow and evolve. The challenges are derived from three inter-related themes (Software Engineering Challenges, Business Model Challenges and Socio-Cultural Challenges) and from a variety of perspectives (private industry, public administration and academic research).