This session affords the challenging problem of hardware/software co-design of complex systems. In this research area, approaches to system level partitioning and to analysis and evaluation of generated alternative solutions are of great relevance. The papers selected for this session cover these topics by considering different methodological aspects.

The first paper, *Quality-Driven Decision Making Methodology for System-Level Design*, by L. Jóźwiak and S.A. Ong, proposes a methodology allowing quality-driven analysis and evaluation of alternative solutions for system-level design and hardware/software partitioning problems. A model for the design decision making process and for specifying and analyzing utility functions is discussed and an example of application is given.

The second paper, *Behaviour-Preserving Transformations in SHE — A Formal Approach to Architecture Design*, authored by J.P.M. Voeten, P.H.A. van der Putten, and M.P.J. Stevens, deals with an Object-Oriented method for hardware/software co-design of complex systems. The SHE method produces behavior and architectural descriptions expressed in the POOSL formal specification language. Behavior-preserving transformations can be applied during analysis and high-level design, thus incorporating architectural constraints and design decision.

The third and last paper of the session, *Considering Test Economics in the Process of Hardware/Software Partitioning*, by G. Al-Hayek, Y. Le-Traon, and C. Robach, affords the problem of hardware/software partitioning in co-design specifications by considering a testability-based approach. Testing cost constraints are evaluated in terms of testing cost values for each unit-level component. The mutation-based test technique is applied for testing software and hardware unit-level implementations.