

Formal Methods for Requirements Engineering

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Tutorial Outline

With the increasing complexity of present-day software systems there is a clear need for tools that help us engineer precise and correct descriptions of the requirements that our target systems must satisfy. This tutorial will motivate and explore the role of formal methods in requirements engineering, with a special emphasis on practical tools. In addition to presenting formal techniques for requirements elicitation, specification, analysis, validation and reuse, the tutorial will examine how formal techniques are especially useful in resolving inconsistencies in multi-perspective specifications, in managing change and in dealing with non-functional requirements. The tutorial will be aimed at both academics and practitioners. No prior familiarity with formal methods (except for basic mathematics) will be required.