This talk will survey some spectacular disasters and impressive successes of software and systems engineering, and will try to draw some conclusions. The last part of the talk will describe the activities of the Systems Engineering Technologies group at IBM Research - Haifa, which develops tools to assist the systems engineering lifecycle, and describe some research opportunities.

Yishai Feldman's passion is software tools, and he prefers creating tools to doing real work. With students and colleagues he developed tools for design by contract in Java, program understanding and transformation, automatic fixing of security vulnerabilities in web applications, and automated video editing based on cinematic principles. Before joining IBM Research - Haifa, Dr. Feldman was a faculty member at Tel Aviv University and the Interdisciplinary Center, Herzliya.