

**Design Considerations in Robotic Development:  
Case History of the Lemmings and Talon**

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Olsen 311

Refreshments at 2:30, Talk from 3:00-4:00

The design of the widely used Talon robot underwent an elongated design history where the robotics did not have the certainty of acceptance that they do today. This talk will review the design history, what influenced the design decisions and how it evolved into the present form. It attempts to show how design philosophy can have significant influence in forming the design result as does classical engineering.

Rated G: Lots of pictures, no formulas.

*Bio:* Arnis Mangolds spent 26 years at Foster-Miller and was Vice President of the Design Systems Integration Group. He was the lead behind the Lemmings and Talon family of robotic vehicles of which there are over 500 units fielded in Iraq as well as many specialty units designed for specific missions. The Lemmings was the first truly autonomous throw-away robotic system. He was instrumental in integrating payloads and overseeing applications and missions for the heavy-lift Talon. In other areas he created Foster-Miller's non-lethal weapons programs and geotechnical instrumentation divisions. He is presently a program manager at the Charles Stark draper Labs in the Special Operations Division.