Seminar Topic:
Enabling Timely Revolutions in the Performance of Multi-Product Semiconductor Fabrication Facilities

by
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Abstract:
An empirically grounded model of a fab operating curve that is sufficiently accurate to make capitalization decisions has been developed. The model is used to simulate the performance of a stylized fab that operates under realistic conditions. Results of the simulation show that significant additional revenue and profit can be generated by extending the lean approach to managing the operating curve that is practiced in most fabs today to an approach that is both lean and value driven. The model is subsequently used to characterize the challenges of modern multi-product manufacturing, where products that operate in highly contrasting economic environments are realized in one fab. The result of this characterization suggests that an integrated, value-driven approach to managing scale, scope and fab cycle time can bring about dramatic increases in fab performance as measured by the net profit that the fab accumulates.

This research has been funded in part by NSF Grant #0822062 -- Enabling Timely Revolutions in Organizational Performance