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Digital Twins and Engineering for Performance

Friday, 26 May 2023 08:00 (20 minutes)

Advancements in technology and data access are followed by significant changes in the scope of engineering work. In Industry 4.0, sensor technologies enable improved monitoring, diagnostic, prognostic and prescriptive analytic capabilities. Systems and processes are now paired with digital twins, a digital asset that parallels the physical assets. This evolution triggers a shift from engineering of design to engineering for performance integrating mathematical models driven by physics, with statistical and analytic data driven models. The talk will review the background of digital twins and sketch future pathways emphasizing engineering for performance, in contrast to engineering of design. A case study from the Israeli railway system will be presented.

References

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