ID de Contribution: **134**                                              Type: **Invited talk**

# Optimal control of polyhedral sweeping processes with chance constraint

*mercredi 30 juillet 2025 12:15 (30 minutes)*

Sweeping processe have been introduced by J.J. Moreau in 1971. These are special differential inclusions where the set-valued right-hand side is represented by the normal cone to some moving set. We consider the optimal control of polyhedral sweeping processe subject to a terminal state constraint. We shall assume that the control is affected by a random perturbation so that the terminal state constraint becomes random too. This leads us to formulate a chance constraint, namely that the terminal state constraint be satisfied with some given high probability. The talk presents several structural results about such sweeping processes (well-posedness, existence of solutions) as well as algorithmic solution approaches.

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**Classification de Session:** Chance-constrained programming

**Classification de thématique:** Chance-constrained programming