

Artificial and natural movement - Nicolas Mansard

How to generate complex movements for arbitrary robots with arms and legs physically interacting in a dynamic environment? During four years, this chair has investigated artificial movement and biomechanics using advanced numerical methods and reinforcement learning (RL), while targeting effective movements on real robot platforms. We recently demonstrated the premiere whole-body predictive control on the full-scale humanoid robot Talos using a pre-trained memory of motion and advanced our understanding of the mathematical foundations behind trajectory optimization and reinforcement learning.