

Kolloquium „Berner Gespräche zur Sportwissenschaft“

Montag, 03.10.2022

16.15 Uhr – 17.45 Uhr

Universität Bern, ZSSw Gebäude C, Raum C001, Bremgartenstr. 145, 3012 Bern

Reconciling normative and descriptive models of human sequential behavior with inverse optimal control

Models of human behavior ranging from decision making to visuomotor behavior have been classically dichotomized as either being normative, i.e. prescribing how people ought to act, or as descriptive, i.e. capturing how people actually do act, often with the notion that they violate the prescriptions of normative theories.

We will present a string of work from my lab, in which we use probabilistic inference methods to invert normative models thereby asking: for what uncertainties about the state of the world, subjective utilities including effort, and for what, possibly false, internal models is observed human behavior optimal?

This not only reconciles normative and descriptive models but additionally allows recovering meaningful cognitive quantities describing individual participants' behavior.

We apply these methods to tasks ranging from laboratory investigations of blinking with the eyes all the way to catching balls in sports.

Prof. Dr. Constantin Rothkopf



Prof. Constantin Rothkopf, PhD is full professor at the Technical University of Darmstadt and director of the Centre for Cognitive Science. His research has been focused on understanding perception and action in naturalistic sequential behavior through computational modeling and behavioral experiments.
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