

HRI Reading Group

@ Instituto Superior Técnico

Meeting #2 (2 Mar 2018)

Welcome!

Announcements

Next week no session (we are at HRI)

Paper

Human-Machine Interaction as Key Technology for Driverless Driving - A trajectory-Based Shared Autonomy Control Approach

S. Gnatzig, F. Schuller, M. Lienkamp

(2012) The 21st IEEE International Symposium on Robot and Human Interactive Communication. September 9-13, 2012. Paris, France.

Allocation of skills - driving scenario

Skills	Human	Machine
Situation Analysis	++	-
Behavioral Decision	++	-
Path Planning	+	0
Reaction Time	-	++
Localization	-	+
Route planning	0	++ assuming correct information
Social Communication V2Hdriver V2Hped	++	--
Ethics	?	?

Allocation of skills - general

Skills	Human	Machine
Situation Analysis	++	-
Generalizability/Edge case	++	-
Mechanics precision	--	++
Mechanics flexibility	++	-
Memory (retrieving stored information)	-	++

Should humans not do what they're not good at?
Should robots not do what they're good at?

Responsibility/Ethical issue

Laziness

The question to ask ourselves are what are the bigger implications of eliminating tasks that require a certain kind of skill humans are worse than robots at (Driving, Manual work, Planning, Remembering things, etc.)

What was the cost function used so far?

Other cost functions?

Safety, efficiency, economic

Personal/Biological/Evolutionary development

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**Who is bringing the
refreshment next week?**