



ICCECIP 2023

Trust and Security:

How Trust in Autonomous Systems Shapes Decision-Making

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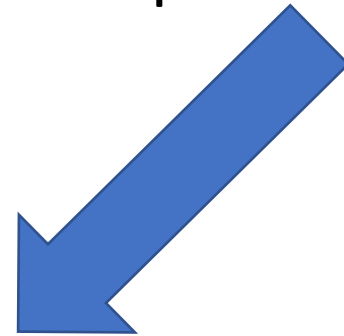
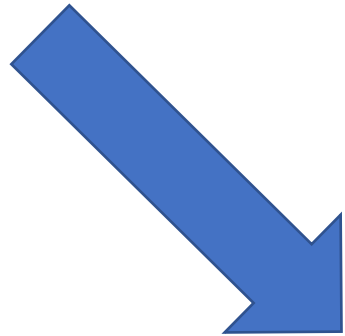
Human-Robot Interaction (HRI)

- The person should feel compelled to engage
- The machine shall be able to participate in the interaction
- Interaction ~ forms of cooperation
 - Additional
 - Supportive
 - Substitutive
- The focal point of this research is the human factor



Situative and individual factors influencing HRI, and its individual perspective

- Technology
- Ethics
- Law
- Infrastructure
- Control or trust
- Perception of positive effects
- Risk perception
- Background information, past experiences



"Readiness"



Research questions, methodology

- How does trust affect decisions related to autonomous systems?
- Quantitative research
- Online questionnaire (google forms)
- Sampling method: convenience, snowball
- Researcher's perspective: interpretative



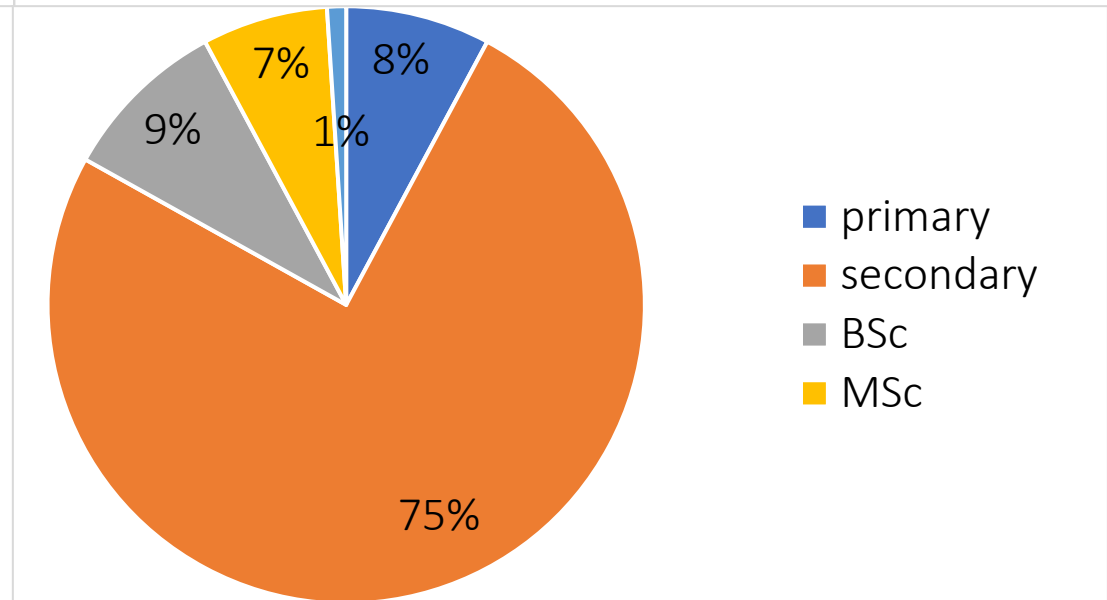
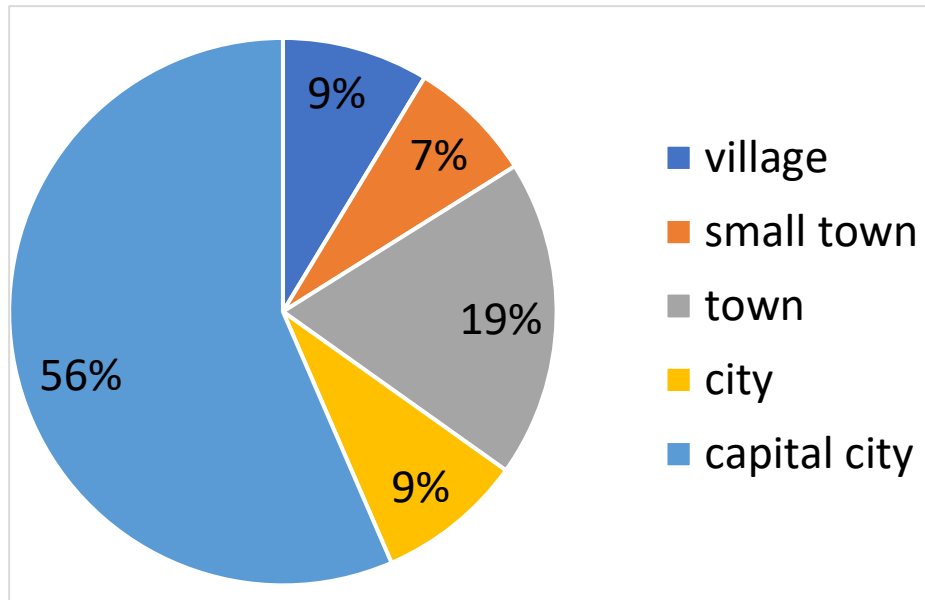
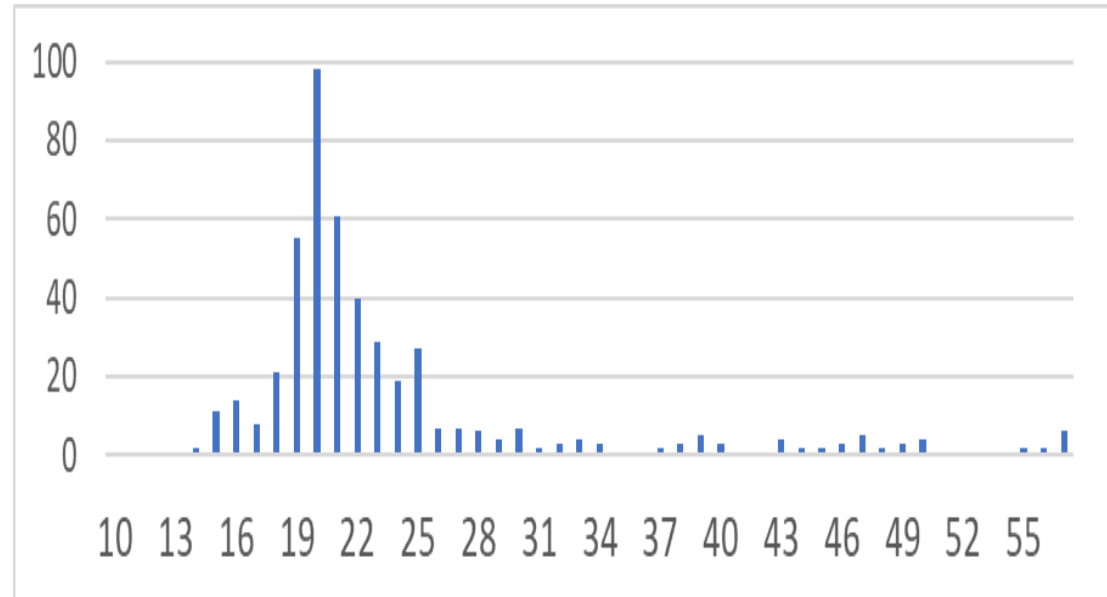
Respondents

485 respondents

198 people work

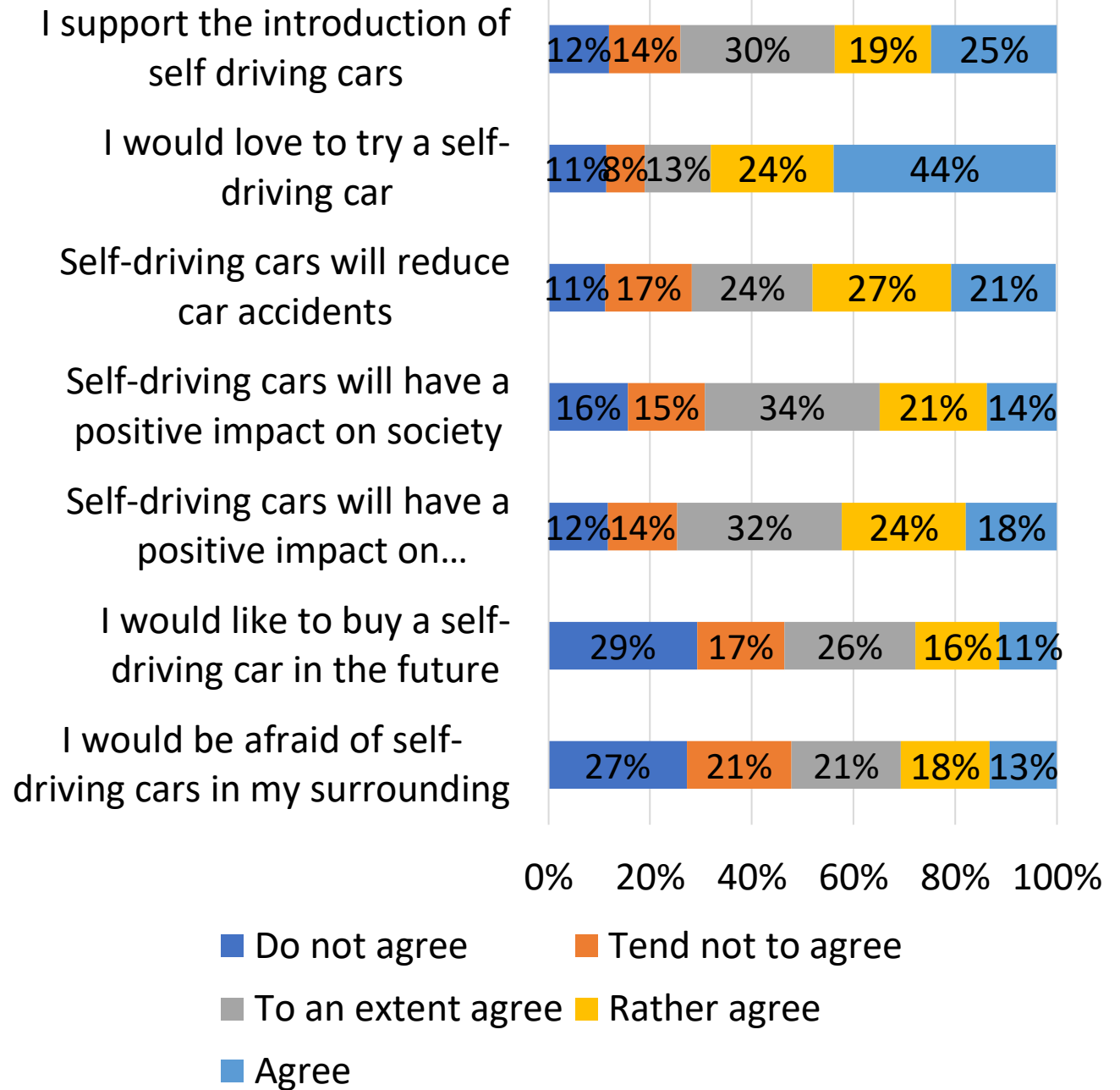
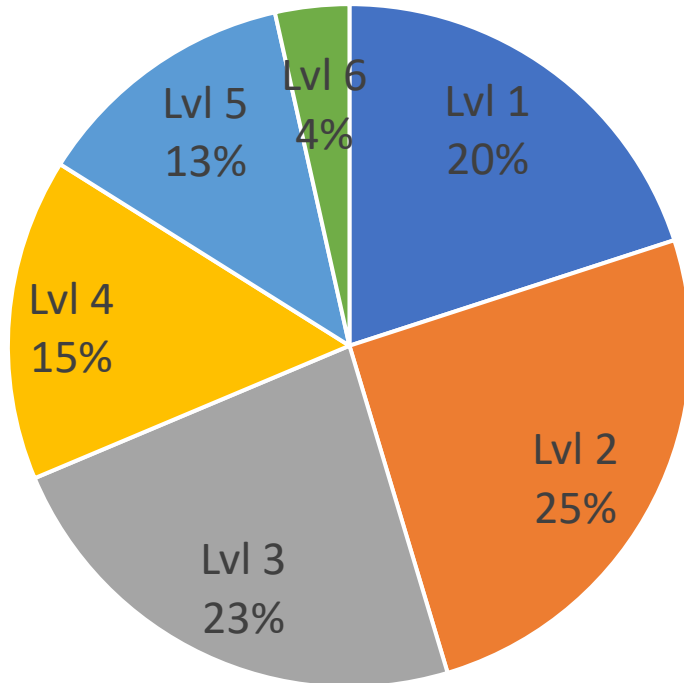
290 male, 188 female (+7)

Avg age 27.366 (Std.Dev. 10,978)





Results





Those who trust are different

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	95% Confidence Interval of the Diff	
									Lower	Upper
What is your gender?	*	90,69	0,000	3,759	291	0,000	0,241	0,064	0,115	0,367
How old are you?	*	10,68	0,001	-2,493	296	0,013	-2,893	1,16	-5,177	-0,609
What is your place of residence?	*	26,198	0,000	-3,58	296	0,000	-0,635	0,177	-0,984	-0,286
Do You still study?	*	14,07	0,000	3,407	296	0,001	0,471	0,138	0,199	0,743

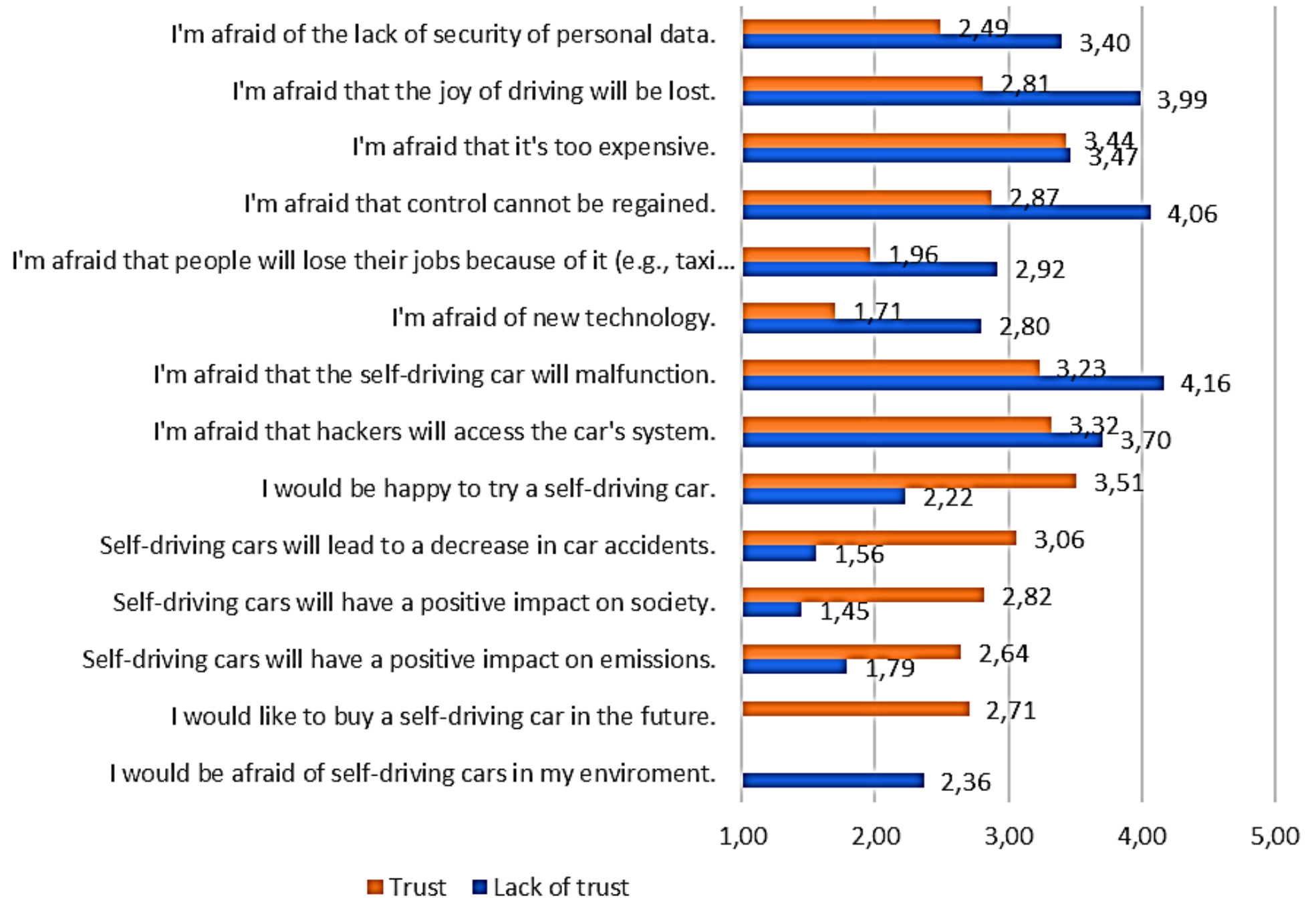
Does not matter!!!

*Equal variances assumed

What is your highest level of education?

Do You have work experience?

Do you have a driver's license?





Summary

- 220 out of 485 clearly do not trust self-driving cars
 - Only 78 have complete trust
- Those who trust are different in many aspects
 - gender, age, place of residence, student status
- However, level of education, work experience, or even having a driving licence does not matter
- Even those who trust have some fears
- Those who do not trust barely perceive potential positive externalities of self driving cars



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Thank you for the kind
attention!

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