

<b>Ethics in Social Robotics</b>								Modulnummer:													
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<b>Master</b> Pflicht/Wahl <input type="checkbox"/> Wahl <input checked="" type="checkbox"/> Basis <input checked="" type="checkbox"/> Ergänzung <input type="checkbox"/> Sonderfall <input type="checkbox"/>				<b>Zugeordnet zu Masterprofil</b> <table border="0"> <tr> <td></td> <td style="text-align: right;">Basis</td> <td style="text-align: right;">Ergänzung</td> </tr> <tr> <td>Sicherheit und Qualität (SQ)</td> <td style="text-align: right;"><input type="checkbox"/></td> <td style="text-align: right;"><input type="checkbox"/></td> </tr> <tr> <td>KI, Kognition, Robotik (KIKR)</td> <td style="text-align: right;"><input checked="" type="checkbox"/></td> <td style="text-align: right;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Digitale Medien und Interaktion (DMI)</td> <td style="text-align: right;"><input checked="" type="checkbox"/></td> <td style="text-align: right;"><input checked="" type="checkbox"/></td> </tr> </table>							Basis	Ergänzung	Sicherheit und Qualität (SQ)	<input type="checkbox"/>	<input type="checkbox"/>	KI, Kognition, Robotik (KIKR)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Digitale Medien und Interaktion (DMI)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Modulbereich: Sonstiges																					
Modulteilbereich: (keine Angabe)																					
Anzahl der SWS		V	UE	K	S	Prak.	Proj.	Σ	Kreditpunkte: 4 ECTS	Turnus Every semester											
		0	0	0	4	0	0	4													
Formale Voraussetzungen: Keine																					
Inhaltliche Voraussetzungen: -																					
Vorgesehenes Semester: ab 1. Semester																					
Sprache: Englisch																					
<p>Ziele: The main objective of this seminar is to use the science fiction novel "The Vestigial Heart: A novel of the robot age" (The MIT Press) written by Prof. Carme Torras (CSIC/UPC, Barcelona) to discuss ethical issues as the following:</p> <ul style="list-style-type: none"> <li>* Would robots primarily create or destroy jobs?</li> <li>* How does robot appearance influence public acceptance? What are the advantages and dangers of robots simulating emotions?</li> <li>* Should public trust and confidence in robots be enforced? If so, how? Could robots be used to control people?</li> <li>* Could robot decision-making undermine human freedom and dignity? Is it acceptable for robots to behave as emotional surrogates? If so, in which cases? Could robots be used as therapists for the mentally disabled?</li> <li>* Are there limits to what a robot can teach? What are the values robot teacher would transmit and encourage? What should be the relationship between robot teachers and human teachers?</li> <li>* What is the boundary between helping and creating dependency? Is it admissible that robots could be designed to generate addiction?</li> <li>* When should humanity wellbeing prevail over the privacy of personal data?</li> </ul> <p>As Neal Stephenson [2011] mentions: "What science fiction stories can do better than almost anything else is to provide not just an idea for some specific technical innovation, but also to supply a coherent picture of that innovation being integrated into a society, into an economy, and into people's lives". And Torras' novel is a masterpiece that will make us travel into an intriguing very technological future.</p> <p>This course is intended for teaching at technological degrees such as computer science and engineering, but also in philosophy, psychology, political science, cognitive science, and linguistics, which all have ethics-related topics in their curricula.</p>																					

Inhalte: This seminar provides an introduction to Roboethics, which is defined by Veruggio et al. [2011] as: “the subfield of applied ethics studying both the positive and negative implications of robotics for individuals and society, with a view to inspire the moral design, development and use of so-called intelligent/autonomous robots, and help prevent their misuse against humankind.”

This seminar will deal with three aspects:

1. Human ethics applied to robotics
2. Codes of ethics embedded in the robots themselves (“machine ethics”)
3. Ethics that would emerge from a potential future consciousness of robots

#### Content

0-Introduction

1-Designing the “perfect” assistant

2-Robot appearance and emotion

3-Robots in the workplace

4-Robots in education

5-Human-robot interaction and human dignity

6-Social responsibility and robot morality

Unterlagen (Skripte, Literatur, Programme usw.): Main:

Torras, Carme (2018). “The Vestigial Heart: A novel of the robot age”, The MIT Press. <https://mitpress.mit.edu/books/vestigial-heart>

Others mentioned in this description:

Stephenson, Neal. (2011). Innovation Starvation. World Policy Journal. 28. 11-16. DOI: 10.1177/0740277511425349.

Veruggio G., Solis, J. and Van der Loos M. (2011) Roboethics: Ethics applied to robotics [from the guest editors]. IEEE Robotics and Automation Magazine, 18(1): 21-22.

Examples of other readings for the course:

Sullins J.P. (2015) Applied professional ethics for the reluctant roboticist. In The Emerging Policy and Ethics of Human-Robot Interaction, edited by L.D. Riek, W. Hartzog, D. Howard, A. Moon and R. Calo, Workshop at the 10th ACM/IEEE International Conference on Human-Robot Interaction, Portland.

Ballesté F. and Torras C. (2013) Effects of human-machine integration on the construction of identity. In Handbook of Research on Technoself: Identity in a Technological Society, edited by R. Luppicini, IGI Global, pp. 574-591.

Nourbakhsh I.R. (2013) Robot futures. MIT Press.

Wallach W. and Allen C. (2008) Moral machines: Teaching robots right from wrong. Oxford University Press.

Form der Prüfung:

To receive credits for this course must: (i) to attend the seminar, (ii) write an essay about the topic of the seminar; (iii) to present your essay in a talk. Attendance to the seminar accounts for 30

The final essay will count for 50

Presentations will account for 20

Arbeitsaufwand

For Independent-studies, please contact Dr.-Ing. Falomir.

Lehrende:  
Zoe Falomir Llansola

Verantwortlich:  
Zoe Falomir Llansola