

Summer School on TrustRobots

15 - 20 September 2019, Vienna, Austria

The Summer School on TrustRobots, is organized by the Doctoral College Trust Robots at TU Wien and TU AUSTRIA. We welcome PhD students and young researchers for an intensive five days of lectures, workshops, networking and socialising covering a wide range of topics in social Human Robot Interaction. It will bring together renowned researchers and international students as well as the students of the TU Wien doctoral college "Trust in Robots- Trusting Robots". (<http://trustrobots.acin.tuwien.ac.at/>).

With the advance of technical systems, more and more intelligent and autonomous machines will populate our human-made living space and challenge fundamentals of our society. Autonomous actions of cars or robots can be scary. The thought of robots going astray is puzzling Europeans, while Asians are rather excited by the thought of things being animated and acting by themselves. Hence, **there is a need to build trustworthy (autonomous) robots to allow and justify human trust in such systems**. The summer school addresses factors which impact trust in autonomous systems and challenges associated with designing trustworthy (social) robots.

Date

Technische Universität Wien, Vienna, Austria will host the summer school from **Sunday, September 15th to Friday, September 20th, 2019**.

Expected arrival is Sunday, September 15th, 2019.

Application

If you are interested in participating in the Summer School "TrustRobots", please send your application to ruth.strobl@tuwien.ac.at. Please note that the number of participants is limited.

Application Deadline: **May 31st, 2019**

Your application should include the following:

- Complete CV
- Motivation Letter:
Please tell us why you want to participate, which related expertise and experience you have and add one selected publication or the draft of the poster you plan to bring to introduce your research plan. Please mention any programming skills or other experiences you have with robots or autonomous systems in your application.

We expect fluent English and an academic background of a doctoral study in the field of (social) robotics or autonomous systems. All disciplinary backgrounds are welcome.

Notification of Acceptance: June 28th, 2019

Costs

Participation fee: €250

The participation fee includes:

- all course material and lecture notes
- 1 TU Wien welcome bag
- 1 Ticket for Public Transport in Vienna
- 5 Lunch and coffee breaks
- 1 Welcome dinner
- 1 Social event
- 1 Farewell party

Travel- and accommodation costs need to be covered by the students individually.

Please bring your own Laptop for the workshops and ABC Lab.

Certificate

You will get a certificate of participation, also stating the number of hours worked. No ECTS points will be granted.

Contact Persons

Organisers

Prof. Dr. **Sabine Köszegi**, sabine.koeszegi@tuwien.ac.at

Prof. Dr. **Markus Vincze**, markus.vincze@tuwien.ac.at

Administration

Ruth Strobl, ruth.strobl@tuwien.ac.at

Programme

The week assembles a program with 12 lectures, a day at the pilot factory including a workshop on Intuitive Programming, three ABC lab sessions, a poster session, and multiple events to socialise and build your own network. Please find the detailed schedule on the next page.

Poster session

We expect all participants to present their work or research plans during multiple "poster session". This will not only be an opportunity to present your work to the other participants of the summer school, but also to learn about the varied research of them.

Please bring a poster size A1. Also, any demo on your laptop is welcome. During the session you will use these to introduce yourself to others.

Intuitive Programming

The Intuitive Programming Workshop will be organized and held by Prof. Sebastian Schlund and Christina Schmidbauer (both TU Wien).

Participants will be introduced to intuitive programming and teaching of a collaborative robot called Panda. After a safety briefing, the intuitive programming interface of the robot will be explained, and participants will then be introduced to how to teach the robot.

Highlight of the workshop which will take place in the Pilot Factory will be the independent work of the participants with the collaborative robot on a given challenge.

After the session the participants will be able to instruct a collaborative robot. Challenges in robotics will be revealed to the participants as well as an understanding of what is possible and what isn't will be formed.

ABC Lab

After a short introduction lecture, students will experience Pepper(s) and Kuka platforms hands-on in the "ABC Lab". The scenario will evolve around "robots in public space or homes" with ABC tasks:

- A(lexa) - focus on HRI / interaction design, e.g.: Pepper greets you at the door, Q&A about the "state of the home"
- B(utler) - focus on CV / grasping: e.g.: Kuka platform brings items
- C(o-operation) - focus on robot-robot interaction: Pepper delegates tasks to Kuka, e.g.: Kuka platform opens door for Pepper or two Peppers interact with human

On Friday, there will be a big final demo of the working system, which will be evaluated and awarded.

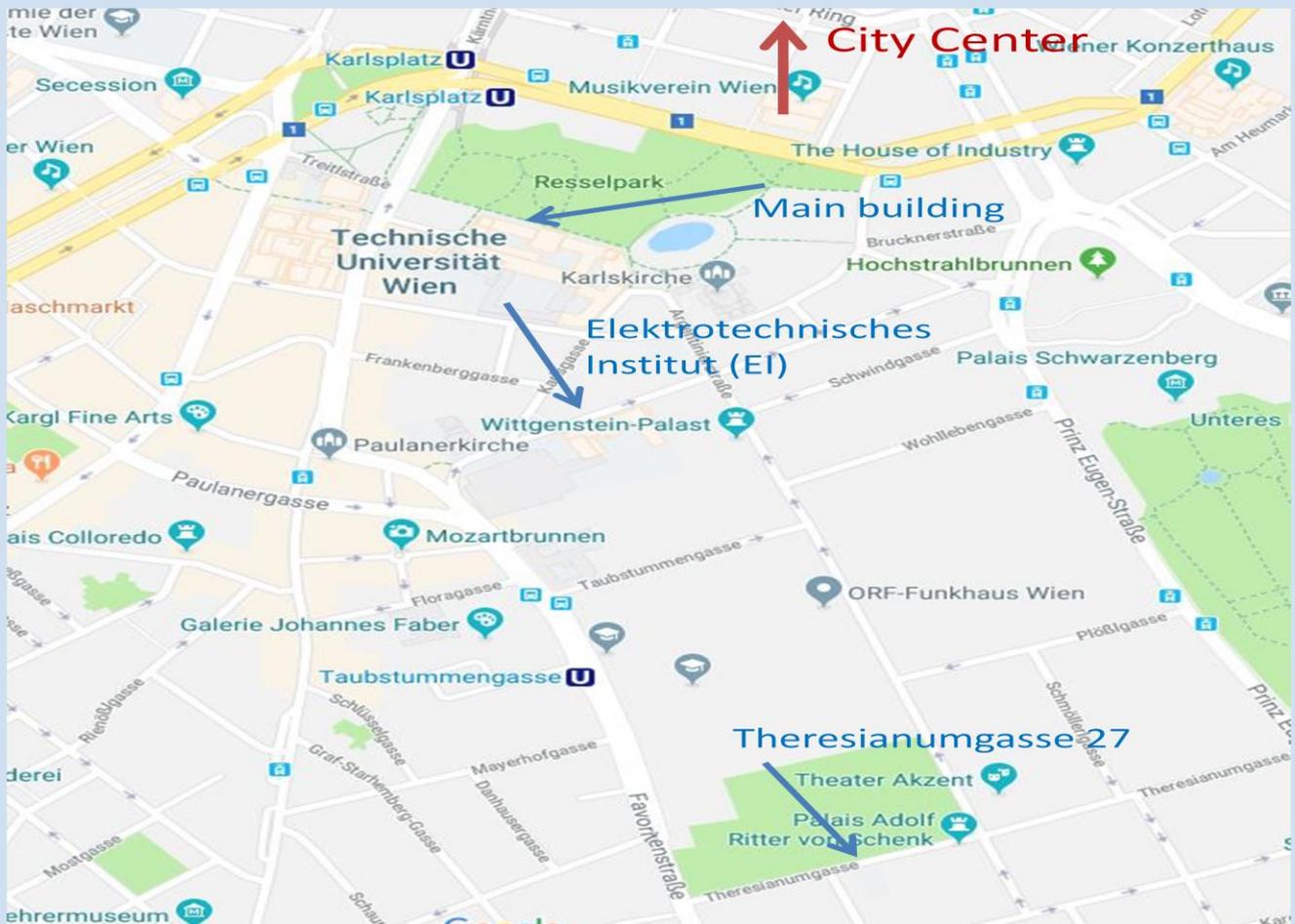
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| Time | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday |
|----------------|----------------------------------|--|--|--|--------------------|--|
| 09.00-10.30 am | Arrival | #FAIL P. Purgathofer TU Wien | <i>Fundamentals of Human-Centered Robotics</i> Sami Haddadin TU München | <i>Safety for Collaborative Industrial Robots</i> Michael Zillich Blue Danube Robotics | ABC Lab exercises | <i>Emotion Expression in HRI</i> Malte Jung Cornell University |
| 10.30-11.00 am | | Break | Break | Break | Break | Break |
| 11.00-12.30 pm | | <i>Working across disciplines to solve complex problems</i> G. Fitzpatrick TU Wien | <i>Fundamentals of Human-Centered Robotics</i> Sami Haddadin TU München | <i>In SAFETY we trust?</i> Michael Hofbaur Joanneum Research | ABC Lab exercises | <i>Human-Robot Interaction in Groups & Teams</i> Malte Jung Cornell University |
| 12.30-02.00 pm | | Lunch Break | Lunch Break | Lunch Break | Lunch Break | Lunch Break |
| 02.00-03.30 pm | | <i>Applied Statistics for HCI</i> Astrid Weiss TU Wien | <i>Testing AI-based systems</i> Franz Wotawa TU Graz | Intuitive Programming @Pilotfabrik | ABC Lab exercises | Demo/Award |
| 03.30-04.00 pm | | Break | Break | Break | Break | Break |
| 04.00-05.30 pm | Kick-Off Event Poster Session | <i>Reliability of machine learning</i> Peter Auer MU Leoben | <i>Trustworthy Robots - Implementing the European Ethics Guidelines</i> Sabine Köszegi TU Wien | Intuitive Programming @Pilotfabrik | Networking Session | |
| Evening | Welcome Dinner | | Social Event | | Farewell Party | |

Location

The summer school takes place at TU Wien, which is located near the city center at Karlsplatz.



Public Transport

- Underground Stop „Karlsplatz“: U1, U2, U4
- Tram Stop „Resselgasse“: 1, 62, Badner Bahn
- Tram Stop „Karlsplatz/Oper“: 2, 71, D

Useful App for Public Transport in Vienna: Qando

Accommodation Options close to Summer School Location

The following hostels and hotels should only serve as example as we do not have special rates.

Hostel

Do Step Inn Central

Südtiroler Pl. 3, 1040 Wien

+43 (0)1 8902351

<https://www.dostepinn.com/central/>

Wombats Hostels „The Naschmarkt“

Rechte Wienzeile 35, A-1040

+43 (0)1 897 23 36

<https://www.wombats-hostels.com/de/vienna/the-naschmarkt/>

A&T Holiday Hostel

Leibnizgasse 66, 1100 Wien

<http://athostel.com/de/>

Ch-Hostel

Börsegasse 1, 1010 Wien, Österreich

<http://ch-hostel.hotelsinvienna.org/de/>

Hotels

Ibis Hotel Hauptbahnhof ***

Canettistraße 8, 1100 Wien

<https://www.accorhotels.com/de/hotel-8564-ibis-wien-hauptbahnhof/index.shtml>

Hotel Drei Kronen ***

Schleifmühlgasse 25, 1040 Wien

+43 1 587 32 89

<https://www.hotel3kronen.at/de/>