



3^o Training Module

Urban Energy Databases, GIS Systems

Various locations @HFT Stuttgart, EIFER/EDF (Karlsruhe)

Stuttgart, Germany

16th – 24th April 2015

AGENDA

Project Coordinator:	Dr. Ursula Eicker HFT University of Applied Sciences - Stuttgart
Training Module Responsible Parties:	Dr. Ursula Eicker EDF/EIFER, SIEMENS
Partners (full and associated):	HFT Stuttgart (GER), EDF/EIFER (GER), EPFL (CH), IES (UK), NOTT (UK), Canton of Geneva (CH), SIEMENS (GER), POLITO (IT), UCD (IRE), WIENE (AUS), AIT (AUS), TUW (AUS), City of Vienna (AUS)

Supported by European Commission, Seventh Framework Programme of the European Community for Research, Technological Development and demonstration Activities, Marie Curie Actions- Initial Training Networks (ITN).

Contract no: 606851



Thursday, 16th April 2015

Location: HFT I/I13

Research Skills: Methodologies and preliminary results

Leaders: HFT, all fellows

Time	Responsible	Topic
08:30 – 09:00	HFT	<i>Registration</i>
09:00 – 10:30	HFT	<ul style="list-style-type: none">• Welcome and agenda review• Management Briefing• Review of Financial Reporting Requirements
10:30 – 10:45		<i>Coffee Break</i>
10:45 – 11:15	Giorgio Aguiaro	ER 3 (AIT) Experienced Researcher Presentation (15 minutes) <i>Followed directly by discussion and question/answer session (15 minutes)</i>
11:15 – 12:00	Parag Wate	ESR 03 (HFT) Student Presentation (20 minutes): <ul style="list-style-type: none">• Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
12:00 – 13:15		<i>Lunch</i>
13:15 – 14:00	Giovanni Tardioli	ESR 05 (IES) Student Presentation (20 minutes): <ul style="list-style-type: none">• 6-Month Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
14:00 – 14:45	Solène Goy	ESR 10 (UCD) Student Presentation (20 minutes): <ul style="list-style-type: none">• Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
14:45 – 15:30	Georgios Kazas	ESR 09 (POLITO) Student Presentation (20 minutes): <ul style="list-style-type: none">• Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
15:30 – 15:45		<i>Coffee Break</i>
15:45 – 16:30	Pilar Monsalvete Álvarez-Uribarri	ESR 07 (HFT) Student Presentation (20 minutes): <ul style="list-style-type: none">• Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
16:30- 17:15	Ana Sancho Tomás	ESR 11 (UNOTT) Student Presentation (20 minutes): <ul style="list-style-type: none">• Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>

17:15 – 17:45	HFT	Management Briefing Summary, Close of Day I
19:30 –		Welcome Dinner Trollinger Trollinger-Stubn: Rotebühlstraße 50 70178 Stuttgart



Friday, 17th April 2015

Location: HFT I/113

Research skills: Methodologies and preliminary results

Leaders: HFT, all fellows

Time	Responsible	Topic
09:00 – 09:30	HFT	Training Module 4: University of Nottingham Suggested Dates: October 1 – 09, 2015
09:30 – 10:00	Jean-Loup Robineau	ER 2 (EPFL) Experienced Researcher Presentation (15 minutes) <i>Followed directly by discussion and question/answer session (15 minutes)</i>
10:00 – 10:45	Mario Potente Prieto	ESR 06 (WIENE) Student Presentation (20 minutes): <ul style="list-style-type: none"> Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
10:45 – 11:00		<i>Coffee Break</i>
11:00 – 11:45	Nils Schüler	ESR 04 (EPFL) Student Presentation (20 minutes): <ul style="list-style-type: none"> 6-Month Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
11:45 – 12:30	Sebastien Cajot	ESR 01 (EDF/EIFER) Student Presentation (20 minutes): <ul style="list-style-type: none"> 6-Month Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
12:30 – 14:00		<i>Lunch</i>
14:00 – 14:45	Kunpeng Wang	ESR 02 (AIT) Student Presentation (20 minutes): <ul style="list-style-type: none"> 6-Month Progress Report (including introduction), objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
14:45 – 15:30	Nina Solomakhina	ESR 08 (SIEMENS) Student Presentation (20 minutes): <ul style="list-style-type: none"> 6-Month Progress Report, objectives and timeline <i>Followed directly by discussion and question/answer session (25 minutes)</i>
15:30 – 15:45	Preston Rodrigues	ER 1 (HFT) Experienced Researcher Presentation (15 minutes) <i>Introduction</i>
15:45 – 16:00		<i>Coffee Break</i>
16:00 – 17:00	HFT	HFT Tour (Starting in basement of Building I –(Façade + district heating) → Building 3 (Artificial Sky) → Roof of Building 3 (PV + weather stations) Summary, Close of Day 2

Saturday, 18th April 2015

Location: Bad Cannstatt <http://www.stuttgart-tourist.de/en/search-book/e-stuttgart-spring-festival>

Starting Point:

Leader:



Monday, 20th April 2015

Location: Morning Session: I/I 13
Afternoon Session: Building I, Aula

Industrial Applications & City Case Studies: Vienna and Geneva Progress Reports, Energy Day

Leader: ERs and HFT Stuttgart

Time	Responsible	Topic
09:00 – 10:15	<i>Jean-Loup Robineau</i>	Geneva Case Study Overview
10:15 – 10:30		Coffee Break
10:30 – 11:45	<i>Giorgio Agugiaro</i>	Vienna Case Study Overview
11:45 – 13:00		Lunch (on your own)
13:00 – 14:15	HFT CINERGY Students Reallabor Students	<p>Energy Day on Urban Energy Management</p> <p>Energy Day Welcome (HFT): introductions, set objective for the afternoon, including the relevant questions to be addressed by this peer-engagement workshop: (10 mins)</p> <ul style="list-style-type: none"> • How can CINERGY methodology be applied to our Campus Project? • Which tools can be used to analyze the Campus? • What could be done for demand side management? • How could we develop renewable energy projects (including financing) • What could we do to reduce electricity consumption? <ul style="list-style-type: none"> • CINERGY ESR Presentation: introduction to project and conceptual framework, followed by details on individual projects (30 mins) • Campus Project (Reallabor) Presentation (Reiner Braun) introduction to project and 3 brief student presentations (20 mins) <p>Additional Workshop Participants (no presentation required from students)</p> <ul style="list-style-type: none"> • Climate Engineering (Markus Binder): • Infrastructure Management (Tobias Popovic') • Lighting Engineering (Ursula Eicker)
14:15 – 15:00	All Participants	<p>Poster Time – all students visit posters and discuss/exchange ideas during extended coffee break. (reorganize room for table session)</p> <ul style="list-style-type: none"> • One DIN A1 poster per CINERGY ESR (from Torino conference paper) • One DIN A1 poster per CINERGY ER about case studies

15:00 – 15:45	All Participants	<p>Thematic Tables Workshop – Address the questions of the day,.</p> <p>Table 1: Demand side management /User Behavior /Electrical appliances (including lighting) : Solene, Ana, Giovanni, Georgios</p> <p>Table 2: Decision support and integrated energy planning: Sebastien, Kunpeng, Parag, Giorgio</p> <p>Table 3: Renewable Energy and Network Modelling: Pilar, Mario, Nils, Nina Jean-Loup</p>
15:45 – 16:00		Coffee Break
16:00 – 16:30		Discussion Continued. Short Statement from each Table: 5-10 Minutes (Which are the main questions, methodology, ...)
16:30 – 17:30	HFT	Summary, Close of Day 3. Block IV (ASTA) free time ☺

Tuesday, 21st April 2015

Location: HFT I/I13

Theory and Foundations: Electricity Network Modelling, WebServices

Research Skills: Epigeum: Working with your Supervisor, Managing your Research Project, and Conferences, Presenting and Networking

Leaders: HFT Stuttgart, ERs

Time	Responsible	Topic
09:00 – 10:30	Eric Duminil (HFT) + Andreas Siebenlist (IFK)	University of Stuttgart /HFT Stuttgart: Electricity Network Modelling + PV Potential Analysis
10:30-10:45		Coffee Break
10:45-12:15	Prof. Dr. Dr. Andrej Pustisek	Energy Markets
12:15 – 13:30		Lunch (on your own)
13:30 – 15:30	Romain Nouvel + Eric Duminil (HFT Stuttgart)	SIMSTADT Platform <ul style="list-style-type: none"> • State of the Art
15:30–15:45		Coffee Break
15:45 – 17:00	ERs	Epigeum Modules 10, 07, & 11 Working with your Supervisor, Managing your Research Project, and Conferences, Presenting and Networking.
17:00 – 17:15		Conclusions, Close of Day 4

Wednesday, 22nd April 2015

Location: Morning Session: I/U27
Afternoon Session: I/I13

Research Skills: Fellows' Group Workshop, IP Rights, Sustainable Finance Instruments, Energy Market

Leaders: HFT Stuttgart, Guest Speakers, ERs

Time	Responsible	Topic
09:00 – 10:15	Dr. Harald Strauß	“An Insight on the Basics (and Political Economy) of Intellectual Property”
10:15-10:30		<i>Coffee Break</i>
10:30 – 12:30	HFT Volker Coors	WebServices and Interfaces: <ul style="list-style-type: none">- Servlet, WebService, SOAP, REST- WebService Interface definition- Examples (in Java) - OGC standard WebProcessingService
12:30-13:30		<i>Lunch (on your own)</i>
13:30 15:30	HFT Prof Tobias Popovic´	Sustainable Finance – Fundamentals, Instruments and Areas of Application
15:30 – 15:45		<i>Coffee break</i>
15:45 – 17:00		Group Workshop, under leadership ER 1 st Group: Decision support and Integrated energy planning 2 nd Group: Urban Energy and Network Modelling 3 rd Group: 3D Geospatial Data Server, Optimisation Methods And Model Integration
17:00–17:15		<i>Conclusions, Close of Day 5</i>

Thursday, 23rd April 2015

Location: Karlsruhe, EIFER, Cairo room (1st floor)

Note: Roundtrip train tickets should be purchased by each ESR/ER/participant for travel from Stuttgart Hbf to Karlsruhe Hbf and then follow the Map + Directions from EDF/EIFER at the end of this Agenda. You can type Hirtenweg directly into bahn.de.

****Book your own roundtrip ticket. BRING A LAPTOP. Eduroam is available. Lunch is included ☺ ****

Theory and Foundations: Data Management and Analysis

Leaders: EDF/EIFER + SIEMENS

Time	Responsible	Topic
09:00 – 10:30	EDF/EIFER Jean-Marie Bahu Dr. Alberto Pasanisi Dr. Jochen Wendel	Introduction, context, challenges <ul style="list-style-type: none">• Energy modeling, 3D data, CityGML, Energy ADE (JMB)• Data infrastructure (“Smart & Low Carbon Cities” use case) (AP)• Urban data analysis, Touchscreen demonstration (JW)
10:30 – 11:00		Coffee break
11:00 – 12:30	EDF/ EIFER Alexandru Nichersu	Hands-on session 1: Data infrastructure <ul style="list-style-type: none">• 3D data software• Data handling, CityGML• Online data visualization
12:30 – 13:30		Lunch
13:30 – 15:30	EDF/ EIFER Dr. Jochen Wendel	Hands-on session 2: Data analysis <ul style="list-style-type: none">• Data set refinement• Analysis tools Discussion and Outlooks <ul style="list-style-type: none">• Adapt to ESR needs (theory, analysis, CityGML outlooks, time series, ...)
15:30 – 15:45		Coffee break
15:45 – 17:00	Prof. Thomas Runkler (Siemens CT, TU Munich)	Cluster Analysis (advanced data analytics methods)
17:00 – 17:15		Conclusions, Close of Day 6

Friday, 24th April 2015

Location: I/I13

Industrial Applications & Case Studies: Group Workshop Findings

Leaders: Fellows, HFT Stuttgart

Time	Responsible	Topic
09:00 – 09:45	ESRs	Presentation of Findings from Group Workshop
09:45 – 10:30	ERs	Review of Case Study Workshop Action Items
10:30 – 10:45		<i>Coffee Break</i>
10:45 – 13:00	HFT	Conclusions, next outreach activities, action items list, next meeting ideas, pictures
13:00		<i>Close of Meeting/ Lunch/ Departures</i>

Training Locations: Stuttgart and Karlsruhe, Germany

Room planning	Date	Time	Location (Building/Room)
	Thursday 16. April 2015	08h30 - 18h00	I/113
	Friday 17. April 2015	08h00 - 18h00	I/113
	Monday 20. April 2015	08h00 - 14h:00	I/113
		14:00 - 18:00	Aula (Building I)
	Tuesday 21. April 2015	08h00 - 18h00	I/113
	Wednesday 22. April 2015	08h00 - 14h00	I/U27 (Building I basement)
		14h00 - 18h00	I/113
	Thursday 23. April 2015	09h00 - 18h00	EDF/EIFER Karlsruhe (via train)
	Friday 24. April 2015	08h00 - 14h30	I/113

Important links:

Citymap Stuttgart >> <http://www.stuttgart.de/item/show/335350/1>
www.vvs.de (local traffic) >> <http://www.vvs.de/en/>
www.bahn.de (Railway) >> <http://www.bahn.de/i/view/GBR/en/index.shtml>

Hotel alternatives (walking distance):

- 1- Stuttgart-Hauptbahnhof MOTEL ONE
Lautenschlagerstraße 14
70173
Stuttgart
Tel. : +49/711/ 30 02 09-0
Fax : +49/711/ 30 02 09-10
<http://www.motel-one.com/de/hotels/stuttgart/hotel-stuttgart-hauptbahnhof/>

- 2- Hotel Wartburg
Lange Straße 49
70174 Stuttgart
Tel. : +49/ 0711/2045-0
Fax: +49/0711/2045-450
<http://www.hotel-wartburg-stuttgart.de/index-e.htm>

- 3- Maritim Hotel Stuttgart
Seidenstraße 34
70174 Stuttgart
Tel. : +49 (0) 711 942-0
Fax: +49 (0) 711 942-1000
Reservation: +49 (0) 711 942-1210
<http://www.maritim.com/en/hotels/germany/hotel-stuttgart>

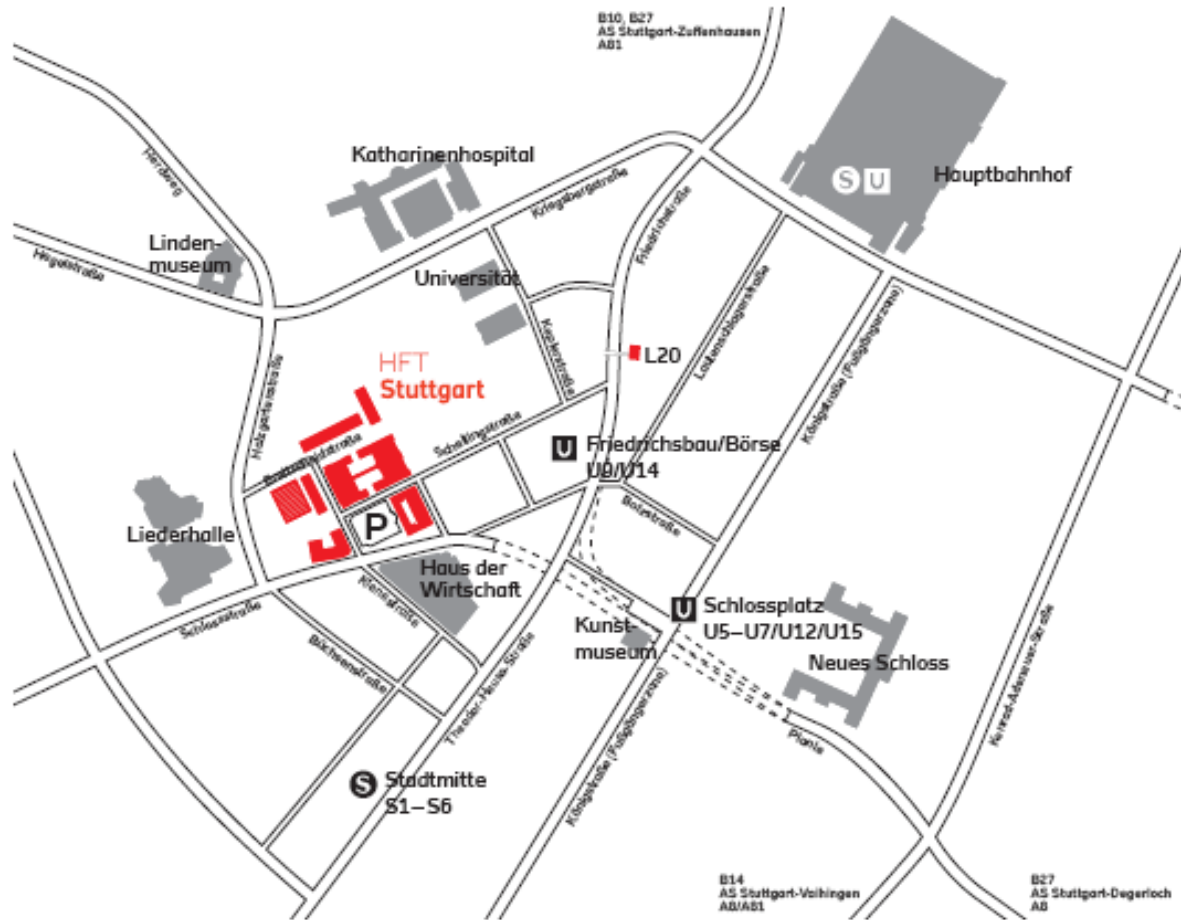
Wifi access:

- Eduroam connection
- Guest Wifi (xxx) password to be provided at meeting.

Contacts:

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Dilay Kesten Erhart: +49 176 81256532

Hochschule für Technik Stuttgart University of Applied Sciences



By car:

Stuttgart Zentrum (town centre), Hauptbahnhof (main station), Friedrichstraße (B27 towards Tübingen). Access via Schellingstraße. Parking is available in the Hofdienergarage directly opposite the HFT entrance.

- From Heilbronn – leave the A81 at Stuttgart-Zuffenhausen and follow the B10, then the B27 into the town centre.
- From Munich – leave the A8 at Stuttgart-Degerloch and follow the B27 to the town centre.
- From Karlsruhe / A8 or Singen / A81 leave at Stuttgart-Vaihingen and follow the B14 to the town centre.

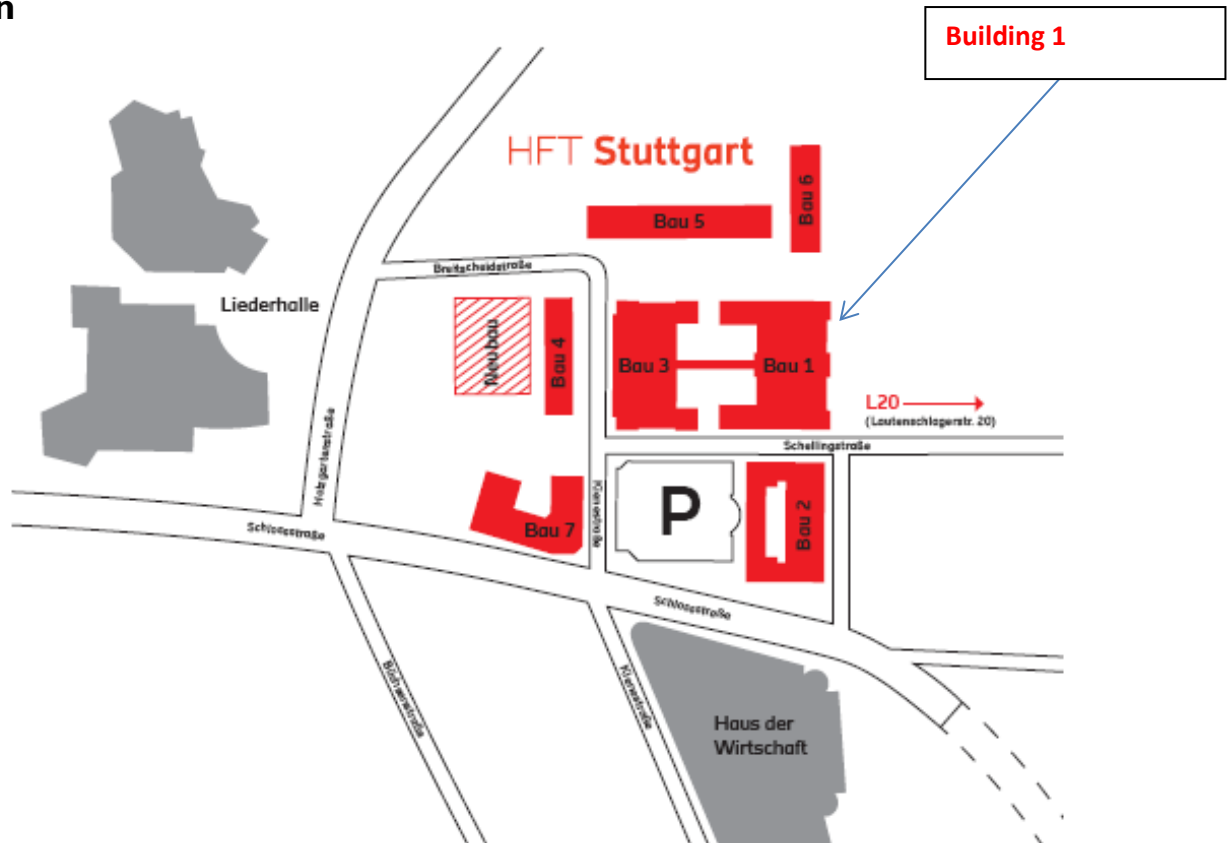
From the airport:

Take the S Bahn (local railway) S2 or S3 towards the Hauptbahnhof (main station). Exit at Stadtmitte (town centre) – a five minute walk or continue to the Hauptbahnhof – a 10 minute walk.

By tram:

Take the U9 to Vogelsang or the U14 to Heslach. Exit at Friedrichsbau (Börse)

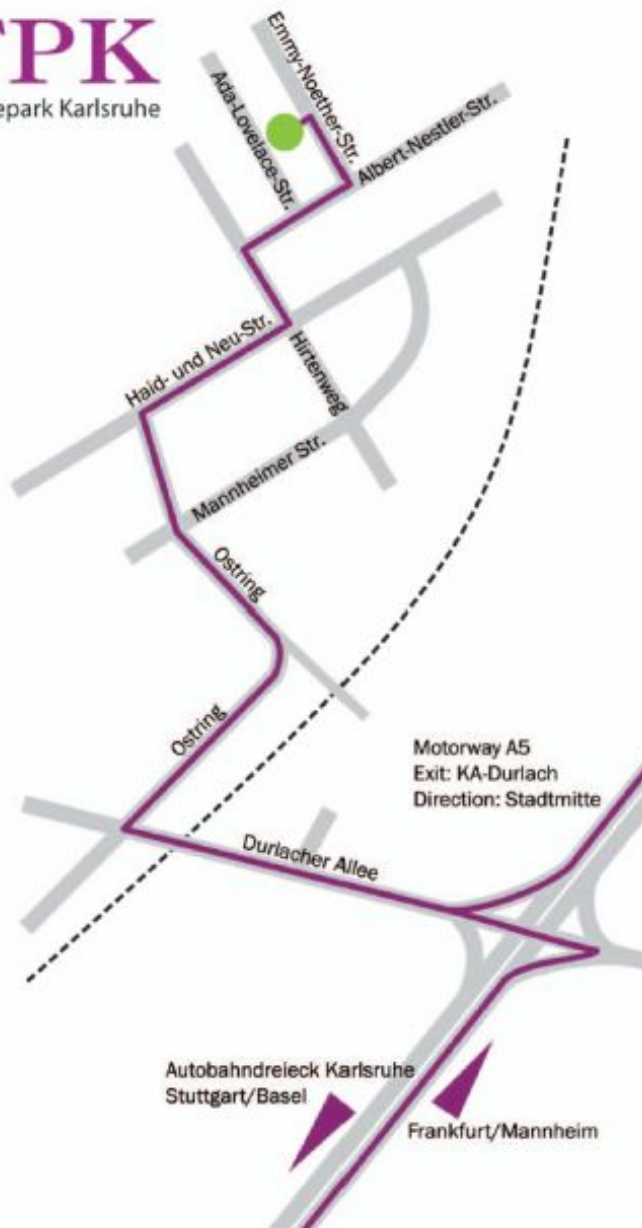
Site plan



- Building 1 Rector's office, administration, lecture rooms
- Building 2 Faculty of Geomatics, Computer Science and Mathematics, computer centre, library, central workshop
- Building 3 Faculty of Architecture and Design
civil engineering laboratories, building materials testing centre,
- Building 4 Faculty of Civil Engineering, Building Physics and Management,
model construction workshops for architecture
- Building 5 Department of Interior Architecture, International Project Management,
Urban Planning, model construction workshops for interior architecture
- Building 6 Department of Interior Architecture
- Building 7 Institute for Applied Research (IAF)
Centre for Sustainable Energy Management (zafh.net)
- L 20 Department of Business Studies
- Centre for Building Physics, laboratory buildings
Stuttgart-Vaihingen, Pfaffenwaldring 10A

Karlsruhe

EIFER: Emmy-Noether-Str. 11
76131 Karlsruhe, Germany



By public transportation

Hirtenweg can directly be filled in bahn.de. Travel from Stuttgart Hbf to Karlsruhe Hbf.

From the railway station Karlsruhe Hbf, take line 4 (direction: Hirtenweg). Get off at Hirtenweg/Technologiepark.

By car

Motorway A5, take the exit: Karlsruhe Durlach direction: Stadtmitte.

At the crossing at the EnBW building, turn right, direction: Stutensee.

At Haid- u. Neu-Strasse, turn right.

At the next crossing left: Hirtenweg.

Next street right: Albert-Nestler-Str.

Next street left: Emmy-Noether-Str.