



Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich

Institute of Cartography  
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ETH Zurich  
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## Research Topics in Cartography Course Programme

Participants: Master students Geomatics and Data Science (ETH)  
Place: ETH Zurich, Campus Hönggerberg, HIL G22 / G21 (G10.5)  
Time: Tuesday, 08:00–10:45  
Start: 20<sup>st</sup> February 2024, 08:00

### About this Course

The goal of this course is to provide students with an overview of current trends in Cartographic research and in particular at the Chair of Cartography at ETH Zurich. The focus of this course will be placed on methods to extract features from historical maps. The participants will partly work in teams, partly on their own or in groups of two or three, depending on the number of students. Teams and individuals specify the responsibilities and tasks within the project. Sessions to discuss the current progress and presentations are scheduled on a regular basis. The course will be completed with a final presentation of the project and a written report. Details on the grading can be found at the end of this document.

### Tutors

*Appointment per email or zoom:*

Yizi Chen	YC	<a href="mailto:yizi.chen@ethz.ch">yizi.chen@ethz.ch</a>
Chenjing Jiao	CJ	<a href="mailto:cjiao@ethz.ch">cjiao@ethz.ch</a>
Sidi Wu	SW	<a href="mailto:sidiwu@ethz.ch">sidiwu@ethz.ch</a>
Xue Xia	XX	<a href="mailto:xiaxue@ethz.ch">xiaxue@ethz.ch</a>

### Speakers

Lorenz Hurni	LH
Christian Häberling	CH
Katharina Henggeler	KH
Marianna Farmakis	MF
Andreas Neumann	AN

### Guest speakers

Dr. Felix Frey (Swisstopo)	FF
Prof. Dr. Yao-Yi Chiang (University of Minnesota)	YYC
Dr. Nathalie Abadie (LASTIG, IGN)	NA

## Course Overview

Project	Date	Type	Content	Room	Persons
	20. Feb.	Lecture Lecture	Course Overview A Brief Outline of Cartographic Research	G22 G22	LH LH
<b>Phase 1</b>	27. Feb.	Lecture	Historical Map Processing Selection of Project Topic (Submission until March 6th)	G22	YC
	05. Mar.	Lecture Exercise I	Feature Extraction I Programming Exercise I (Submission until March 11th)	G22 G10.5	YC
	12. Mar.	Lecture Exercise II	Feature Extraction II Programming Exercise II (Submission until March 18th)	G22 or G21 G10.5	SW/XX
	19. Mar.	Tutorial	Deep Learning for Map Processing	G22 or G10.5	YC
	26. Mar.	Guest Lecture	Maps and Map Series of Switzerland – A Historical Take	G22 (G10.5)	FF
	02. Apr.	Easter holidays			
<b>Phase 2</b>	09. Apr.	Lecture	Historical Maps – Evolution and Modern Relevance	G22 (G21)	LH
	16. Apr.	Presentations	Intermediate Project Presentations	G22 (G21)	Students
	23. Apr.	Guest Lecture	Machines Reading Maps with Spatial AI	G22 (G21)	YYC
	30. Apr.	Lecture	Copyright and License for Cartographic Applications	G22 (G21)	SW
<b>Phase 3</b>	07. May	Lecture	Research at the Atlas of Switzerland & the Swiss World Atlas	G22 (G21)	AN/CH
	14. May	Lecture	Other Research Projects at the Chair of Cartography	G22 (G21)	KH/MF
	21. May	Guest Lecture	Linking Directories with Historical Maps	G22 (G21)	NA
	28. May	Presentations Lecture	Final Project Presentations Course Conclusion	G22 (G21)	Students LH
	15. June	Submission of Project Reports (incl. Code, Data, etc.)			