



ETH Zürich Prof. Dr. David Kaufmann Institute for Spatial and Landscape Development SPUR – Spatial Development and Urban Policy https://spur.ethz.ch/ Für den Studiengang Raumentwicklung und Infrastruktursysteme ETH Zürich

Themenkatalog für Seminar-, Bachelor- und Masterarbeiten

Aktualisiert: November 2024

Liebe Studierende

Es freut uns, dass Sie sich für unsere Themenstellungen interessieren. Es wird nachdrücklich empfohlen, sich frühzeitig vor der Einschreibung für die Arbeit mit den zuständigen Betreuenden der jeweiligen Arbeit abzusprechen und die Vorstellung beider Seiten bezüglich der Arbeit abzuklären. Die aktuellen Themenstellungen können Sie dieser Themenliste entnehmen.

Wir freuen uns jedoch auch über **selbsterarbeitete Themenvorschläge** innerhalb unserer Forschungsbereiche (Raumplanung, Partizipation, städtische Politikmassnahmen) und würden Sie gern dazu ermutigen.

Vielen Dank

Dear Students,

The SPUR Team supervises master and bachelor theses as well as seminar papers. The current topics can be found in the link below.

In addition, we very much welcome **topic suggestions from students** that are within our research areas of spatial planning, participation, urban policy, densification policies and housing policy. Please feel free to reach out to our group members in this regard.

Thank you



Themenstellungen

Towards City-Led Masterplanning, Rethinking the position and potential of urban planning in Switzerland	3
Successes and hurdles in the implementation of internal densification. Investigation of multiple perspectives, narratives and facts of a complex planning task.	5
Dense housing in the media. A quantitative analysis	7
The Impact of Urban Redevelopment on Residential Segregation in Switzerland	8
Wohnen, pendeln und nutzen des urbanen Raums in Zürich durch systemrelevante Arbeitende	9
Public participation in urban planning	10
Perceptions of Urban Street Redesign: A Mixed-Methods Analysis of Public Opinion	11
Urban Pilot Typologies: Understanding Infrastructure Technology Pilot Projects in Informal Settlements Worldwide	12
Urban Pilots to Policy or Policy to Pilots: Process tracing the links between infrastructure technology pilots in informal settlements and policy uptake	13
Informal Settlement Infrastructure Research Networks: Mapping the literature on infrastructure access in informal settlements	14
The splintered urban experience: mobility patterns of delivery workers in Zürich.	15



Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Anouk Kuitenbrouwer (akuitenbrouw@ethz.ch)
Titel der Arbeit:	Towards City-Led Masterplanning, Rethinking the position and potential of urban planning in Switzerland
Тур:	Masterthesis
Beschrieb der Arbeit:	Some of the hurdles for state of the art urban planning practices in Switzerland are structural in nature. With the first articles being defined in 1969 and the first Federal Spatial Planning Act being in force since 1981, Swiss spatial planning (Raumplanung) and urban planning (Städtebau) are a relatively young disciplines. One of the main characteristics of the legal framework is the distinction that was made between formal and informal instruments and as well as the protection of private property.
	While the legally binding spatial planning instruments such as Structure Plans and Land Use plans where considered 'formal', the urban design instruments such as masterplans were considered 'informal' and therefore remained undefined. While this is sensible in the context of the protection of ground ownership, it placed urban planning in limbo ever since.
	Compared to international practices, particularly in countries with a historically strong urban development culture's, the differentiation between formal and informal is unique. In countries such as France, the Netherlands or Spain, spatial planning and urban planning are considered complementary disciplines leading to a more fruitful co-existence of qualitative aspects of masterplans and legal planning frameworks. Internationally, urban planning is often led by the city and differs from Switzerland in that it usually takes precedence over legal instruments such as development plans, rather than forming the preparatory informal basis.
	In Switzerland cities and municipalities are responsible for the formal spatial planning instruments, while urban planning, and with that a good part of the production of urban space, is delegated to private parties that initiate and finance the increasingly complex development procedures in exchange for their return on investment. The political and technical representatives of cities and municipalities, host or participate but usually don't lead urban planning processes.
	Urban planning, through masterplans, urban concepts, guidelines and other informal instruments produces the conceptual and technical content while at the same time there is no consolidated pathway for implementation in the subsequent procedures .At the start of development, ambition levels and task description are led by private parties with input from public hand. The urban planning tasks often ends with the delivery of a high level framework for the subsequent legal planning procedure where qualitative and technical content is again abstracted. Without a defined pathway for quality guidance during implementation, this constellation often results in the loosening or loss of cross-disciplinary coordination and a scaling back of

	ambitions in the face of pragmatism and economic concerns. The informal status of urban planning in the context of privately led development is therefore an important hurdle for innovation, coordinated development and quality guidance.
	To address the pressing challenges of today and tomorrow effectively, urban planning, as a powerful tool to manage complex change, , deserves a more prominent role in the production of urban space in Switzerland. If cities are to become denser, greener, and more equitable, urban planning should be employed to contribute the qualitative aspects of spatial design and overcome the piecemeal development efforts of private parties into a cohesive whole. This requires strengthening the formal status of urban planning in a better co-existence with spatial planning and for cities and municipalities to take more often ownership.
	The core of the research question is which approaches allow spatial planning and urban planning to be more intertwined allowing for iteration, maintain coherence, and ensure innovation with both spatial and qualitative dimensions.
	The research may explore, but is not limited to, the following areas:
	 An overview of spatial planning instruments at the municipal and city level in Switzerland, highlighting the roles and responsibilities of key actors and the variations in the followed procecces.
	 Case studies of successful masterplan-driven urban developments, both in Switzerland and internationally, to gain insights into diverse masterplanning approaches.
	 Interviews with key stakeholders from planning departments, development entities, and urban planners, offering additional perspectives and deeper understanding.
	• A design proposal at the masterplan scale—larger than an area development but smaller than a structure plan—accompanied by a high-level process design concept.
Besonderes:	The choice of topic must be discussed with the supervisor. The thesis can be written in English or German.
Onumeronet site	The thesis is composed of a written and a design component.
Gruppenarbeit: Studierende pro Gruppe: Studierende pro Thema:	1-2

SPUR Spatial Development and Urban Policy









Besonderes:	The choice of topic must be discussed with the supervisor. The thesis can be written in English or German.
	The thesis is composed of a written and an optional design component.
Gruppenarbeit:	
Studierende pro Gruppe:	1-2
Studierende pro Thema:	



Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Malte Wehr (mawehr@ethz.ch)
Titel der Arbeit:	Dense housing in the media. A quantitative analysis.
Тур:	Master thesis
Beschrieb der Arbeit:	Densification is the central paradigm of the current revision of the Swiss Spatial Planning Act. It is intended to help protect undeveloped land and provide affordable housing, while accommodating a growing population. However, densification projects repeatedly provoke (local) opposition and trigger (local) public debates. Various actors claim a lack of public acceptance to contribute to the slow densification of urban and peri urban space in Switzerland and that resident need to better understand the positive effects of dense urban settlements. We posit that this argument is short-sighted. On the one hand, it ignores the socio-economic and ecological consequences of urban densification,
	which residents perceive at the local level and hence have reason to oppose dense urban development. On the other hand, the claim that if individuals were only informed well enough about the claimed positive (and quite generalized if not naive) consequences of densification, then acceptance, articulated via electoral support at the ballot, would be higher, is ignoring a rich literature to suggest otherwise.
	However, another perspective is absent. Political communication plays an important role in opinion-formation processes, and crucially, the role of media has been shown to influence public opinion and inspired a whole (sub)discipline, spanning across various social sciences. In essence, the argument goes that media creates flows of information between the levels of policy-making and the electorate with multi- directional effects influencing the public opinion-formation process.
	Based on statistical learning methods, mainly natural language processing, the aim of the proposed theses is to look into these information flows and develop a classification model that predicts support for densification in media documents since 2002. Based on this, the overall goal to describe the public media discourse on densification in Switzerland to infer how informed Swiss residents are about densification.
Besonderes:	A thesis written in English is preferred and an exposé or research design is expected to guide the writing process.
Gruppenarbeit: Studierende pro Gruppe: Studierende pro Thema:	no 1-2

Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Fiona Kauer (<u>fkauer@ethz.ch</u>)
Titel der Arbeit:	The Impact of Urban Redevelopment on Residential Segregation in Switzerland
Тур:	Master thesis
Beschrieb der Arbeit:	Urban redevelopment could lead to a change in the socio-economic composition of residents in a neighborhood and at the city level and thus, changes segregation levels. Segregation refers to the spatial separation of different population groups in a given area (Massey & Denton, 2003; Musterd, 2005). Group separation can be measured based on social factors (i.e. ethnicity, nationality, age) or economic positioning (i.e. income, wealth). The physical separation in terms of housing locations of different groups is usually referred to as residential segregation (Tan, 2023). Segregation can cause the erosion of social cohesion and stability (Musterd et al., 2017) and it can negatively impact social mobility (Musterd, 2005). For dynamics of inequality and parallel societies, the spatial dimension of segregation is key (Deurloo et al., 2022). This thesis investigates whether there is a correlation between urban redevelopment and changes in residential segregation, particularly focusing on the spatial separation of high- and low-income residents in urban neighborhoods and cities, potentially altering segregation levels. The study uses quantitative methods to measure the correlation between segregation and redevelopment projects in Zurich, Switzerland. Quantitative data will include summary statistics on segregation and the level of building activity in given areas and regression analysis. The goal is to understand whether redevelopment leads to a dispersal of low-income residents and an influx of higher-income residents, thereby reducing income segregation levels. Methods include quantitative data analysis.
Besonderes:	The choice of topic must be discussed with the supervisor. The thesis can be written in English or German.
Gruppenarbeit:	no
Studierende pro Gruppe: Studierende pro Thema:	1-2



Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Sarah Schilliger (<u>sschilliger@ethz.ch</u>) Katrin Hofer (<u>kathofer@ethz.ch</u>) Carole Ammann (<u>carole.ammann@unilu.ch</u>)
Titel der Arbeit:	Wohnen, pendeln und nutzen des urbanen Raums in Zürich durch systemrelevante Arbeitende
Тур:	Seminar-, Bachelor- oder Masterarbeit
Beschrieb der Arbeit:	 Die Auswirkungen der Covid-19 Pandemie betrafen Menschen unterschiedlich. Personen mit einer schwächeren sozioökonomischen Stellung erlitten stärkere wirtschaftliche Einschnitte, verfügten über weniger berufliche Sicherheit, waren dem Virus mehr ausgesetzt und hatten dadurch mit grösseren gesundheitlichen und psychischen Herausforderungen zu kämpfen. Bereits bestehende Ungleichheiten wurden durch die Pandemie verstärkt, da systemrelevante Arbeiten oft durch Frauen und Migrant:innen ausgeübt werden. Für das aktuelle SPUR Forschungsprojekt 'Die COVID-19 Pandemie und ihre Auswirkungen auf systemrelevante Berufe in Städten' haben wir knapp 40 Interviews mit vier Berufsgruppen geführt, nämlich dem Kitapersonal, Bus- und Tramfahrer:innen, Verkaufspersonal, sowie Reinigungspersonal (je 9-10 Interviews pro Berufsgruppe). In einem Frageblock ging es um die Wohnsituation, den Arbeitsweg, sowie allgemein um den urbanen Raum in Zürich, sowie dessen Veränderungen. In dieser Arbeit sollen diese bereits generierten Interviewdaten systematisch ausgewertet und in einen Bezug zur aktuellen Literatur gestellt werden. Im Rahmen einer Seminar- oder Bachelorarbeit können folgende Fragen bearbeitet werden: Wie wohnen systemrelevante Arbeitende heutzutage in Zürich und Umgebung? Wie gehen sie mit dem knappen Wohnungsangebot und den stetig steigenden Preisen um? Wie zufrieden sind sie mit ihrer aktuellen Wohnsituation und wo und wie würden sie idealerweise wohnen? Wie sieht der Arbeitsweg dieser systemrelevanten Arbeitenden aus? Wo im urbanen Raum Zürich halten sie sich gerne auf und weshalb? Und gibt es bezüglich des Wohnens, Pendelns, und der Nutzung des urbanen Raums Unterschiede zwischen den vier Berufsgruppen? Im Rahmen einer Masterarbeit wird ein zusätzlicher methodischer Fokus erwartet. Studierende sollen sich mit der Frage auseinandersetzen, wie räumliche Informationen aus qualitativen Daten verwendet und dargestellt werden können (inklusive Mapping Methoden). Die erarbeiteten Method
	getestet werden.
Besonderes:	Die Themenwahl bedingt eine vorgängige Absprache mit der Betreuungspersonen. Gute Deutschkenntnisse sind notwendig. Die Arbeit kann auf Deutsch oder Englisch geschrieben werden.
Gruppenarbeit: Studierende pro Gruppe:	Nein
Studierende pro Thema:	1-2



Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Katrin Hofer (<u>kathofer@ethz.ch</u>)
Titel der Arbeit:	Public participation in urban planning
Тур:	Bachelor, Seminar or Master thesis
Beschrieb der Arbeit:	 Public participation has become increasingly important in urban planning. In addition to formally regulated opportunities for participation, such as consultations (Vernehmlassungen) or public displays of plans (öffentliche Auflagen), supplementary, voluntary forms of participation are also used time and again. Landowners and investors, for example, also include participatory elements when developing their sites. In addition, new participatory elements are being developed and adopted worldwide, incl. digital formats. In the context of a bachelor's, seminar or master's thesis, different forms of online and/or offline participation can be analysed. Topics of this thesis could include: A mapping of the different (formal and informal) forms of public participation in urban planning in Switzerland An exploration of digital technologies that enable (new forms of) participation in urban planning Identification and critical analysis of best practices of public participation in urban planning (in Switzerland or in another context)
Besonderes:	The choice of topic must be discussed with the supervisor. The thesis can be written in English or German.
Gruppenarbeit: Studierende pro Gruppe: Studierende pro Thema:	No 1



Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Michael Wicki (<u>wimi@ethz.ch</u>)
Titel der Arbeit:	Perceptions of Urban Street Redesign: A Mixed-Methods Analysis of Public Opinion
Тур:	Masterarbeit
Beschrieb der Arbeit:	This thesis, as part of the D-BAUG Lighthouse Project: E-Bike City, investigates public perceptions of urban street redesign through the analysis of open text responses that were collected within a street-redesign survey experiment. The E-Bike City project explores reallocating approximately 50% of street space towards active mobility and public transport, aiming to reduce car reliance and enhance cycling infrastructure in Swiss urban areas. Results from an online experiment with visually randomly varied street redesigns show that urban greenery, road type, and social aspects play crucial roles in influencing public acceptance and willingness to cycle. Yet, we don't know much about the <i>why</i> behind these findings.
Besonderes:	The choice of topic requires prior consultation with the supervisor. The thesis can be written in English or German.
Gruppenarbeit:	Nein
Studierende pro Gruppe:	
Studierende pro Thema:	1-2

Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Dr. Yael Borofsky (yaelb@ethz.ch)
Titel der Arbeit:	Urban Pilot Typologies: Understanding Infrastructure Technology Pilot Projects in Informal Settlements Worldwide
Тур:	Masterarbeit
Beschrieb der Arbeit:	The aim of this study to analyze the characteristics of infrastructure technology pilot projects conducted in informal settlements and build a typology of pilot projects. Specifically, the goal is a descriptive analysis that a) develops a typology of pilot projects, b) aims to understand if these typologies have a relationship to geography or other spatial factors, and c) analyzes specific examples of each pilot type to demonstrate similarities and differences between the types. For this purpose, a database of pilot projects from all the over the world will be made available to the student. The database will include
	substantial information about the pilot project, such as the type of technology tested, site location, implementer(s), collaborating partners, etc. as well as information about the source of these details. The student will be able to draw on this data, potentially using one or a mix of methods depending on personal interest.
	This work is embedded in a current research project of the SPUR chair studying how infrastructure technology pilots in informal settlements translate into policy responses funded by the Swiss Network for Internation Studies. The research project is being conducted in collaboration with Stellenbosch University in South Africa. ("How do infrastructure technology pilots in informal settlements translate into policy?")
Besonderes:	The choice of topic requires prior consultation with the supervisor. The thesis must be written in English.
Gruppenarbeit: Studierende pro Gruppe: Studierende pro Thema:	Nein 1-2



Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Dr. Yael Borofsky (yaelb@ethz.ch)
Titel der Arbeit:	Urban Pilots to Policy or Policy to Pilots: Process tracing the links between infrastructure technology pilots in informal settlements and policy uptake
Тур:	Masterarbeit
Beschrieb der Arbeit:	The aim of this study is to closely trace and compare two types of processes by which infrastructure technology pilots in informal settlements and local, regional, or national policy are linked. The first type of process is when an implementing organization conducts a pilot to test a new type of infrastructure technology with the aim of influencing a policy response that will help the technology scale. The other type of process is when policymakers create a framework policy to elicit pilot projects in order to learn what options are most viable to scale. The goal is to select one or two examples of each type and closely analyze the key actors and factors involved in each example, then compare the cases to develop new insights. For this purpose, a database of pilot projects from all the over the world will be made available to the student. The database will include substantial information about various pilot project, such technology tested, site location, implementer, collaborating partners, etc. as well as information about the source of these details. The student will be encouraged to draw cases from this database, however, it is also possible that the student finds additional cases from outside the database that can also be added. This work is embedded in a current research project of the SPUR chair studying how infrastructure technology pilots in informal settlements translate into policy responses funded by the Swiss Network for Internation with Stellenbosch University in South Africa. ("How do infrastructure technology pilots in informal settlements translate into policy?")
Besonderes:	The choice of topic requires prior consultation with the supervisor. The thesis must be written in English.
Gruppenarbeit: Studierende pro Gruppe: Studierende pro Thema:	Nein N/A 1



Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (kadavid@ethz.ch)
Betreuende der Arbeit:	Dr. Yael Borofsky (yaelb@ethz.ch)
Titel der Arbeit:	Informal Settlement Infrastructure Research Networks: Mapping the literature on infrastructure access in informal settlements
Тур:	Bachelorarbeit
Beschrieb der Arbeit:	The aim of this study is to produce multiple mappings of both the peer- reviewed and gray literature on infrastructure access in informal settlements. The goal is to systematically understand both geographical gaps (e.g. where do most publications come from vs where do the case studies take place) in the literature as well as gaps in the literature on particular types of infrastructure services (e.g. what are the most often described technologies).
	For this purpose, a database of pilot projects from all the over the world will be made available to the student. The database will include substantial information about various pilot project, such technology tested, site location, implementer, collaborating partners, etc. as well as information about the source of these details. The student will be able to draw from database as well as conduct their own systematic literature search.
	This work is embedded in a current research project of the SPUR chair studying how infrastructure technology pilots in informal settlements translate into policy responses funded by the Swiss Network for Internation Studies. The research project is being conducted in collaboration with Stellenbosch University in South Africa. ("How do infrastructure technology pilots in informal settlements translate into policy?")
Besonderes:	The choice of topic requires prior consultation with the supervisor. The thesis must be written in English.
Gruppenarbeit:	Nein
Studierende pro Gruppe:	N/A
Studierende pro Thema:	1-2



Fachbereich:	Spatial Planning and Urban Policy (SPUR)
Leiter:in der Arbeit:	Prof. Dr. David Kaufmann (<u>kadavid@ethz.ch</u>)
Betreuende der Arbeit:	Nicolás Palacios (npalacios@ethz.ch
Titel der Arbeit:	The splintered urban experience: mobility patterns of delivery workers in Zürich.
Тур:	Semesterarbeit / Masterarbeit
Beschrieb der Arbeit:	In recent years the platform delivery sector has been dominated by transnational companies such as Uber eats, Deliveroo, Just Eat (Lieferando), Wolt, whose workforce at a global level is mostly composed of migrant workers, being Switzerland not an exception to this scenario. The aim of the study is to understand conceptually and in practice the spatial patterns of mobility of delivery riders in Zurich, and highlight the labor/urban experience nexus, for this purpose the project can be divided in stages depending on the type of project chosen by the student: Semesterarbeit: It is expected for the student to develop a literature review which engages with questions of mobility of workers in the sector, contrasting workers' mobilities during their work time and their mobilities in their free time. Based on concepts such as "splintering urbanism" (Marvin and Graham, 2001; Graham and Marving, 2022), and ideas of centrality and peripherality (Lefebvre, 1974, 1970). Masterarbeit: For a master's project it is expected for the student to develop the literature review and conceptual part, as well as exploring and putting into place a method for tracking delivery workers and eventually visualizing their mobilities in the city of Zürich. This can be done with third party software if the date is not shared with third parties. For this stage the student must receive an ethics approval, which is necessary for any project involving participants.
Besonderes:	The choice of topic requires prior consultation with the supervisor. The thesis can be written in English
Gruppenarbeit:	Nein
Studierende pro Gruppe: Studierende pro Thema:	1-2