

# Contents

---

## **Introduction**

*Jens Martin Gurr/Rolf Parr/Dennis Hardt* ..... 9

## **I Metropolitan Space and the Built Environment**

### **Urban Typology, Morphology, Iconography**

*Wolfgang Sonne* ..... 17

### **Exploratory Statistical Analysis of Spatial Structures in Urban Datasets**

*René Westerholt* ..... 37

### **Spatial Analysis as a Tool for Architectural and Urban Historians**

*Cornelia Jächner* ..... 63

### **Historic Preservation as Change Management: Methods in Context**

*Ingrid Scheurmann* ..... 75

### **Urban Art History: Cultural Heritage, Flâneurs, and Points of Presence**

*Barbara Welzel* ..... 91

## **II Metropolitan Functions and Infrastructures**

### **Methods of Central Place Research**

*Thomas Terfrüchte* ..... 115

### **Methods for the Identification and Analysis of Clusters in Metropolitan Economies: Overview and Comparative Assessment**

*Matthias Kiese* ..... 135

<b>Agent-Based Modelling of Infrastructure Systems</b>	
<i>Johannes Weyer/Marlon Philipp/Fabian Adelt</i> .....	155

<b>Methodologies for Urban Transport Studies</b>	
<i>Regine Gerike/Joachim Scheiner</i> .....	167

### **III Metropolitan Resilience, Sustainability, and Health**

<b>Disaster Risk and Climate Impact Research</b>	
<i>Stefan Greiving</i> .....	187

<b>Volunteered Geographic Information for Sustainable Urban Development</b>	
<i>Andreas Rienow</i> .....	205

<b>Assessing Metropolitan Biodiversity Using Aquatic Environmental DNA Metabarcoding</b>	
<i>Kamil Hupało/Till-Hendrik Macher/Robin Schütz/Florian Leese</i> .....	223

<b>Concept and Methods in Urban Public Health</b>	
<i>Susanne Moebus</i> .....	249

### **IV Metropolitan Culture(s)**

<b>Storytelling</b>	
<i>Julia Sattler</i> .....	275

<b>Narrative Analysis</b>	
<i>Julia Sattler</i> .....	289

<b>Interdiscourse Theory and the Analysis of Collective Symbols</b>	
<i>Rolf Parr</i> .....	299

### **V Interdisciplinary and Mixed-Methods Approaches to Urban Complexity**

<b>Comparisons</b>	
<i>Julia Sattler</i> .....	315

<b>Urban Modelling: Quantitative and Qualitative Approaches</b>	
<i>Jochen Gönsch/Jens Martin Gurr</i> .....	325

<b>Delineating and Typifying Urban Neighbourhoods: A Mixed-Methods Approach</b>	
<i>Thomas Terfrüchte/Susanne Frank</i> .....	343
<b>Mixed-Methods Monitoring of Large-Scale Urban Development Projects: The Case of Lake Phoenix in Dortmund-Hörde</b>	
<i>Susanne Frank/Verena Gerwinat/Ulla Greiwe/Jörg Peter Schmitt</i> .....	367
<b>Contributors</b> .....	383