

Smart Cities and Tourism:

Co-creating experiences, challenges and opportunities

Smart Cities and Tourism: Co-creating experiences, challenges and opportunities

Editors:

**Dimitrios Buhalis, Babak Taheri and
Roya Rahimi**



Goodfellow Publishers Ltd



Published by Goodfellow Publishers Limited,
26 Home Close, Wolvercote, Oxford OX2 8PS
<http://www.goodfellowpublishers.com>

British Library Cataloguing in Publication Data: a catalogue record for this title is available from the British Library.

Library of Congress Catalog Card Number: on file.

ISBN: 978-1-915097-09-5

DOI: 10.23912/9781915097088-4973

Copyright © Dimitrios Buhalis, Babak Taheri, Roya Rahimi, 2023

All rights reserved. The text of this publication, or any part thereof, may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, storage in an information retrieval system, or otherwise, without prior permission of the publisher or under licence from the Copyright Licensing Agency Limited. Further details of such licences (for reprographic reproduction) may be obtained from the Copyright Licensing Agency Limited, of Saffron House, 6–10 Kirby Street, London EC1N 8TS.



Design and typesetting by P.K. McBride, www.macbride.org.uk

Cover design by Cylinder

Contents

Introduction	vii
<i>Dimitrios Buhalis, Babak Taheri and Roya Rahimi</i>	
Author biographies	xiv

Part I: Smart Cities: Concepts and Issues

1	Smart cities' digital transformation	1
<i>Ekaterina Glebova and Wojciech Lewicki</i>		
2	Smart technology trends in the tourism and hospitality industry	14
<i>Evrin Çeltek</i>		
3	From Smart City 1.0 to Smart City 3.0: Deep understanding of the smart cities concept and evolution	43
<i>Diogo Correia and Leonor Teixeira</i>		
4	Smart sports in smart cities	60
<i>Ekaterina Glebova and Michel Desbordes</i>		

Part II: Smart Tourism and Smart Tourists

5	Advances in smart destination management and public governance: Tourism innovation ecosystems for digital transformation	74
<i>Carlos Romero-Dexeus, Aurkene Alzua-Sorzabal, Diana Gómez-Bruna, Francisco Femenia-Serra and Edurne Vidal López-Tormos</i>		
6	Smart tourists in smart cities	90
<i>Tomáš Gajdošík</i>		
7	Co-creating and co-destructing personalised experiences through smart tourism	106
<i>Katerina Volchek, Dimitrios Buhalis and Rob Law</i>		

Part III: Smart Cities and Smart Tourism Destinations

8	Smart city or smart tourism destination? The formation of smart Ljubljana in Slovenia	124
<i>Abbie-Gayle Johnson and Jillian M. Rickly</i>		

9	Tourism destination metagovernance and smart governance in Milan, Italy	142
	<i>Alberto Amore, Pavlos Arvanitis, Francesca d'Angella and Manuela De Carlo</i>	
10	Smart model of sustainable tourism development: Lessons from Madeira Island, Portugal	159
	<i>Luiz Pinto Machado and António Manuel Martins de Almeida</i>	
11	Smart City strategy as a means to improve residents' quality of life: The Case of Barranco, Lima, Peru	179
	<i>Otto Regalado-Pezúa, Luis Felipe Galarza Cerf and Leonardo Toro</i>	
12	Smart tourism destinations: Europe's smartest and most visited cities	195
	<i>Kadir Çakar</i>	
	Conclusion	215
	<i>Dimitrios Buhalis, Babak Taheri and Roya Rahimi</i>	
	Index	217

Introduction

The urbanisation, growth and associated challenges of modern cities, coupled with the rapid development of new Information Communication Technologies (ICTs), propelled the development of the 'smart cities' concept (Yin et al., 2015). The term 'smart city' appeared first in the early 1990s with emphasis on technology, innovation and globalization in the process of urbanization (Gibson et al., 1992). It was regarded initially as the possibility of providing citizens with information and services via the integration of ICTs into a city's infrastructure (Ahvenniemi et al., 2017). Smart cities aimed to support and encourage economic growth and human development, leading to improvements in the quality of life for the residents, visitors, companies and institutions that coexist in cities (Silvia et al., 2018).

The smart cities concept has attracted great attention since 2008, with the launch of IBM's Smarter Planet project (Palmisano, 2008). Since then it has continued to grow through research and evolution. The term has been defined differently by different scholars, and new definitions and conceptualisations of smart cities are still emerging. Harrison et al. (2010) defined a smart city as an instrumented, interconnected and intelligent city. A common definition for a smart city is using ICT to make a city (e.g., administration, education, transportation) more intelligent and efficient (Washburn et al., 2009). Smart cities drive the next generation of urban and tourism marketing management evolution. The smart cities of tomorrow engage locals, visitors, governments and businesses in an intelligent, collaborative and connected ecosystem (Yin et al., 2015).

Global urbanisation is progressing rapidly, resulting in human concentration in urban economic centres which offer a wide range of services. In 2015, there were 29 megacities – cities with more than 10 million inhabitants – and the forecast is that there will be over 40 megacities by 2030 (Allianz, 2015). The so-called *gigacities*, with more than 50 million inhabitants are emerging, mainly in overpopulated countries such as India, Brazil and China. Cities increasingly use integrated technologies to centralise resource management, improve efficiency, sustainability and mobility in order to address the effects of urbanisation.

By becoming smart, cities can generate urban economic development and change systems to benefit from greater convenience, growth in revenues and reductions in costs, reduced bureaucracy and increased transparency (Vinod Kumar, 2017). The IoT (Internet of Things) network can create a smart city infrastructure which supports every aspect of urban management, including transportation, health care, agriculture and entrepreneurship (Yasuura et al., 2018). Governments globally invest in smart city initiatives to better manage resources by integrating human and technological capital (Angelidou, 2015; Calzada & Cobo, 2015).

Smart city infrastructure includes strategic health care and intelligent transportation systems (Caragliu et al., 2011). Several frameworks for strategic smart sustainable development have emerged, primarily for urban regions with the potential to transfer these set-ups to different regional contexts (Bibri & Krogstie, 2017).

There is growing interest in the convergence of ICT and IoT in tourism and smart cities (Buhalis, 2020; Boes et al., 2016; Thompson et al., 2022; Buhalis & Amaranggana, 2014; Um & Chung, 2019; Gretzel et al., 2016; Kromidha et al., 2021; Huang et al., 2017). Global tourism has been evolving with technology through the integration of ICT towards an eTourism system (Buhalis, 2003). Advances in ICT have enabled the development of products and services on a variety of levels, from assembly lines to multi-stakeholder complex and interconnected systems. The proliferation of Internet connectivity through distributed networks, *Big Data* and the *Internet of Everything* have revolutionised the production and consumption of tourism experiences, ultimately reengineering economies at both micro and macro levels (Buhalis, 2020).

Smart tourism destinations take advantage of the smartness and smart city developments by applying data science to decision-making in destination management and marketing, urban planning and policy making (Shafiee, et al., 2021; Xiang et al., 2015). Gretzel et al. (2015) suggest that the key aspect of smart destinations is the integration of ICTs into physical infrastructure. Stemming from the conceptualisation of smart city, smart tourism destinations emerge to take advantage of interoperability and interconnectivity of networked organisations and co-create innovative products and services to maximise value for all stakeholders (Buhalis, 2020; Boes et al., 2016; Buhalis & Amaranggana, 2015; Buhalis & Foerste, 2015).

Smartness is effectively the glue of interconnected and mutually beneficial systems and stakeholders that provide the infostructure for the value creation for all (Buhalis, 2020). It is primarily about technology-empowered agile management and marketing that performs dynamic big-data mining, appreciates internal and external contextual factors and maximises benefits brought to all stakeholders in real time (Buhalis & Sinarta, 2019). Smart cities also empower digital accessibility and tourism for all, reducing inequalities (Fernández-Díaz et al., 2022). Buhalis et al. (2022) demonstrate how cruise ships emerge as smart destinations through smart cruising and technology diffusion throughout their ecosystem. Smart tourism destinations also address deconstruction of value in the system through the sharing economy (Buhalis et al., 2020) or other forces.

This book, with its three parts and 12 chapters, provides a comprehensive insight into the current issues and opportunities on smart cities and smart tourism in the next generation of urban evolution. It provides a better understanding of city services, but also enhances and evaluates the local and visitor experience as well

as city decision making processes by examining how smartness creates liveable environments and business solutions.

Part 1: Smart Cities: Concepts and Issues

This part explores the smart cities concepts and issues offering a comprehensive analysis. It starts with smart cities' digital transformation. Ekaterina Glebova and Wojciech Lewicki in their chapter provide the theoretical basis for analysing the concept of a smart city. The chapter explores digital transformation phenomena in the urban area, as well as the main drivers of change, various impacts, and the contributions of stakeholders of smart cities to development projects in any context. It further focuses on the main challenges for smart cities, related to technological progress, and explains what makes modern cities smart. It proposes a conceptual framework for the implementation of digital technologies within the concept of a smart city. In Chapter 2, *Smart technology trends*, Evrim Çeltek focuses on using artificial intelligence, big data and robotic technologies in processes and organizations. In Chapter 3, Diogo Correia and Leonor Teixeira focus on a deep understanding of the smart cities concept and evolution. The chapter provides a comprehensive examination on the evolution of the concept, highlights the associated comprehensions and terms, and proposes a common understanding of the smart city concept.

In Chapter 4, Ekaterina Glebova and Michel Desbordes focus on the development of strategies that connect sports and cities. The chapter explores the three main categories of smart sports related actors: (1) the sports environment user, a citizen practicing physical activity and using sports facilities, (2) the team player or athlete, who practices as part of a club, amateur or professional (3) the sports fan, spectator or/and follower, a person who is interested in sports content consumption (live or mediatory watching). It provides a theoretical basis to learn and analyse the interrelation of sports and the concept of smart cities, followed by real examples. By distinguishing different types of sports, urban infrastructure, and their nature and purposes, it provides a comprehensive review of the nature, features, and dimensions of sports in the smart city framework.

Part 2: Smart Tourism and Smart Tourists

This starts with Chapter 5 by Carlos Romero-Dexeus, Aurkene Alzua-Sorzabal, Diana Gómez-Bruna, Francisco Femenia-Serra and Edurne Vidal López-Tormo. The chapter tackles the research problem of how city governments can take ownership of smart city/smart destination projects to ensure that they create value for residents and local organizations. Therefore, it focuses on the value smart services create and how local governments can ensure that value is created and delivered. In Chapter 6, Tomáš Gajdošík focuses on smart tourists in smart cities and the ways smart cities contribute to citizen value co-creation and

sustainability and improve the quality of life. Chapter 7 by Katerina Volchek, Dimitrios Buhalis and Rob Law is on co-creating and co-destructing personalised experiences through smart tourism. This chapter conceptualizes the potential of a smart tourism city to co-create and co-destruct tourist experiences through personalization. It defines personalization as a service offering in tourism and explains the reason why this is acknowledged as one of the determinants of the advanced tourist experience. The chapter applies Service-Dominant Logic (SDL) to conceptualize the potential of not only co-creating but also co-destructing tourist experiences through the process of personalization.

Part III - Smart Cities and Smart Tourism Destinations

The last part starts with Chapter 8 by Abbie-Gayle Johnson and Jillian M. Rickly. In this chapter Ljubljana in Slovenia is selected as a case study to focus on the formulation of smart tourism destination. This chapter explains the role of collaboration in bringing together diverse stakeholders and roles. Chapter 9, by Alberto Amore, Pavlos Arvanitis, Francesca d'Angella and Manuela De Carlo, provides empirical evidence from Milan, Italy, through a longitudinal analysis of destination meta governance and smart governance processes between 2004 and 2019. From a destination meta governance perspective, the genesis of Milan as a tourist destination saw a shift from a networked hierarchy to a more collaborative and adaptive mode of smart meta governance. The insights from Milan provide a timely reflection on the nexus between new technologies, governance archetypes, and meta governance responses and how these contribute to the development of a city into a culturally vibrant and smart destination.

Chapter 10, by Luiz Pinto Machado and António Manuel Martins de Almeida, explains the practical difficulties involved in building up the required infrastructure of a smart island/destination. These include implementation complexities as well as transformative and disruptive concepts in traditional tourism ecosystems that have been operating for years relatively smoothly. This chapter bridges the theoretical foundations of smart tourism with empirical research focused on less studied insular geographical settings. Hence it interprets operators' attitudes regarding several key factors affecting the development of smart tourism in Madeira, Portugal. The chapter includes policy-making aspects, supply-side elements, and in-house technical competencies. Valuable insights regarding strengths, weaknesses, and challenges are discussed to analyse the current state of affairs and devise a coherent and comprehensive methodology to adopt a progressive agenda focused on smart tourism on islands.

Chapter 11, by Otto Regalado-Pezúa, Luis Felipe Galarza Cerf and Leonardo Toro, is based on the case of Barranco, Lima, Peru. It focuses on technological management of a smart city which is followed by the case of the district of Barranco, Lima in Peru. Chapter 12 by Kadir Çakar examines the competitiveness

of four European smart cities that are classified as smart destinations from a comparative analysis perspective. The chapter aims to examine to what extent the four selected cities offer innovative services and smart facilities, based on the smart city initiatives, for both residents and visitors. Thus, the research contributes to the literature by offering valuable insights and key implications for destination managers.

The book, with its comprehensive approach, serves as a main reference point for smart cities researchers, scholars, students and practitioners. It provides definitions and conceptualisations of smart city and smart tourism through exploring the implications of technological developments, stakeholder engagement and sustainability. This book uses a multi-disciplinary approach to explore different cities from around the world whilst exploring smart user behaviour, information system design, and service management.

References

- Ahvenniemi, H., Huovila, A., Pinto-Seppä, I., & Airaksinen, M. (2017). What are the differences between sustainable and smart cities?. *Cities*, 60, 234-245.
- Allianz, (2015), The megacity state: The world's biggest cities shaping our future, Allianz Munich. https://www.allianz.com/content/dam/onemarketing/azcom/Allianz_com/migration/media/press/document/Allianz_Risk_Pulse_Megacities_20151130-EN.pdf
- Angelidou, M. (2015) Smart cities: A conjuncture of four forces, *Cities*, 47, 95-106.
- Bibri, S.E. & Krogstie, J. (2017), Smart sustainable cities of the future: An extensive interdisciplinary literature review, *Sustainable Cities and Society*, 31, 83-212.
- Boes, K., Buhalis, D. & Inversini, A. (2016). Smart tourism destinations: ecosystems for tourism destination competitiveness. *International Journal of Tourism Cities*, 2(2), 108-124.
- Buhalis, D., (2003), *eTourism: Information technology for strategic tourism management*. Pearson Education.
- Buhalis, D., (2020), Technology in tourism-from information communication technologies to eTourism and smart tourism towards ambient intelligence tourism: a perspective article, *Tourism Review*, 75(1), 267-272 <https://doi.org/10.1108/TR-06-2019-0258>
- Buhalis, D. & Amaranggana, A. (2014). Smart Tourism Destinations in Xiang, Z. and Tussyadiah, I. (Eds.). *Information and Communication Technologies in Tourism 2014*, pp. 553-564. Dublin: IFITT
- Buhalis, D. & Foerste, M., (2015). SoCoMo Marketing for Travel and Tourism: Empowering Co-Creation of value, *Journal of Destination Marketing and Management*, 4(3), 151-161.

- Buhalis, D., and Sinarta, Y., (2019), Real-time co-creation and nowness service: lessons from tourism and hospitality, *Journal of Travel and Tourism Marketing*, 36(5), pp.563-582 <https://doi.org/10.1080/10548408.2019.1592059>
- Buhalis, D., Andreu, L. & Gnoth, J., (2020), The dark side of the sharing economy: Balancing value co-creation and value co-destruction. *Psychology and Marketing*. 37(5), 689–704. <https://doi.org/10.1002/mar.21344>
- Buhalis, D., Papathanassis, A. & Vafeidou M., (2022), Smart Cruising: smart technology applications and their diffusion in cruise tourism *Journal of Hospitality and Tourism Technology* <https://doi.org/10.1108/JHTT-05-2021-0155>
- Calzada, I. & Cobo, C., (2015). Unplugging: Deconstructing the smart city. *Journal of Urban Technology*, 22(1), 23-43.
- Caragliu, A., Del Bo, C., Nijkamp, P. (2011). Smart Cities in Europe, *Journal of Urban Technology*, 18(2), 65 – 82.
- Fernández-Díaz, E., Jambrino-Maldonado, C., Iglesias-Sánchez, P.P. & de las Heras-Pedrosa, C. (2022), Digital accessibility of smart cities - tourism for all and reducing inequalities: tourism agenda 2030, *Tourism Review*, 77. <https://doi.org/10.1108/TR-02-2022-0091>
- Gibson, D.V., Kozmetsky, G. & Smilor, R.W. eds., (1992). *The Technopolis Phenomenon: Smart cities, fast systems, global networks*. Rowman & Littlefield.
- Gretzel, U., Sigala, M., Xiang, Z. & Koo, C., 2015, Smart Tourism: Foundations and Developments. *Electronic Markets*, 25(3), 179–188
- Gretzel, U., Zhong, L., & Koo, C., 2016. Application of Smart Tourism to Cities *International Journal of Tourism Cities*, 2(2), 101-107
- Kromidha, E., Gannon, M., & Taheri, B. (2021). A profile-based approach to understanding social exchange: authentic tour-guiding in the sharing economy. *Journal of Travel Research*, 00472875211062616.
- Harrison, C., Eckman, B., Hamilton, R., Hartswick, P., Kalagnanam, J., Paraszczak, J. & Williams, P., (2010). Foundations for smarter cities. *IBM Journal of Research and Development*, 54(4), 1-16.
- Huang, C. D., Goo, J., Nam, K., & Yoo, C. W. (2017). Smart tourism technologies in travel planning: The role of exploration and exploitation. *Information & Management*, 54(6), 757–770
- Palmisano, S.J., (2008). A smarter planet: the next leadership agenda. *IBM*. November, 6, pp.1-8.
- Shafiee, S., Rajabzadeh Ghatari, A., Hasanzadeh, A. & Jahanyan, S. (2021), Smart tourism destinations: a systematic review, *Tourism Review*, 76(3), 505-528. <https://doi.org/10.1108/TR-06-2019-0235>

- Silva, B.N., Khan, M. & Han, K., (2018). Towards sustainable smart cities: A review of trends, architectures, components, and open challenges in smart cities. *Sustainable Cities and Society*, 38, .697-713.
- Thompson, J., Taheri, B., & Scheuring, F. (2022). Developing esports tourism through fandom experience at in-person events. *Tourism Management*, 91, 104531.
- Um, T. & Chung, N., (2019). Does smart tourism technology matter? Lessons from three smart tourism cities in South Korea. *Asia Pacific Journal of Tourism Research*, pp.1-19.
- Vinod Kumar, T.M. (Ed.), (2017) *Smart Economy in Smart Cities*, Springer, Berlin.
- Washburn, D., Sindhu, U., Balaouras, S., Dines, R.A., Hayes, N. & Nelson, L.E., (2009). Helping CIOs understand “smart city” initiatives. *Growth*, 17(2), 1-17.
- Yasuura, H., Kyung, C., Liu, Y. & Lin, Y.L., (2018). *Smart Sensors at the IoT Frontier*, Springer, Berlin.
- Yin, C., Xiong, Z., Chen, H., Wang, J., Cooper, D. & David, B.,(2015). A literature survey on smart cities. *Science China Information Sciences*, 58(10), 1-18.

Author biographies

Editors

Professor Dimitrios Buhalis is a Strategic Management and Marketing expert with specialisation in Information Communication Technology applications in the Tourism, Travel, Hospitality and Leisure industries. He is Director of the eTourism Lab and Deputy Director of the International Centre for Tourism and Hospitality Research, at Bournemouth University Business School in England. He was Visiting Professor at the School of Hospitality and Tourism Management, Hong Kong Polytechnic University during the academic year 2021-2022. He is the Editor in Chief of the most established journal in tourism, *Tourism Review*, and the Editor in Chief of the *Encyclopedia of Tourism Management and Marketing*. His research pioneers smart and ambient intelligence tourism with a particular focus on innovation, entrepreneurship and destination ecosystems management. Professor Buhalis has written and co-edited more than 25 books and 300 scientific articles. He is a world expert in strategy, marketing, technology, tourism and hospitality. His research is referenced widely, and Professor Dimitrios Buhalis was recognised as a Highly Cited Researcher 2020, 2021 and 2022 by Clarivate™. He is the 3rd most cited for tourism, 2nd most cited for hospitality, 10th on strategy, and 29th in Marketing on Google Scholar with more than 55000 citations and h-index 101. For more information, books, articles and presentations see www.buhalis.com.

Prof Babak Taheri is a Professor of Marketing in Nottingham Business School at Nottingham Trent University, UK. He has an established reputation in the marketing field with emphasis on marketing management, consumer behaviour and tourism, leisure and cultural consumption. The innovative nature of his research is underpinned by multi-disciplinary work and methodologically robust measurement of key concepts. Babak has over 120 academic publications, and currently serves as Senior Editor of *Tourism Management Perspectives* and Associate Editor for *The Service Industries Journal* and *International Journal of Contemporary Hospitality Management*.

Dr Roya Rahimi is a reader in Marketing and Leisure Management. She is the REF coordinator of UoA 17 at the University of Wolverhampton, Business School. She has more than 50 academic publications including 3* and 4* journals with high impact factors. Her work has been published in top-tier journals such as *Annals of Tourism Research*, *Journal of Tourism and Hospitality Research*, *Journal of Travel & Tourism Marketing*, *International Journal of Contemporary Hospitality Management* and *Anatolia*. Her work has also been presented at various international conferences and appears in book chapters released by Routledge, CABI, Emerald and IGI. She has been published in a variety of languages. Roya is the Associate

Editor for *Journal of Tourism Management Perspectives*, and book reviews editor for *Journal of Hospitality and Tourism Technology*. She sits on the editorial board of leading journals including the *Journal of Hospitality and Tourism Technology*, *European Management Review*, *European Journal of Tourism Research*, *Journal of Hospitality & Tourism Management* and the *International Journal of Tourism Sciences*. Roya co-edited a special issue on sustainability for the *International Journal of Contemporary Hospitality Management*. She received the Valene L. Smith Prize for the best-presented paper at the International Conference of Service Quality in Hospitality & Tourism in Isfahan in 2016. She was shortlisted for her outstanding contribution to research in the University of Wolverhampton's Vice-Chancellor awards for staff excellence in 2017 and 2018. In 2018 two of her papers were selected as Outstanding Papers of the year in the 2018 Emerald Literati Awards. Roya has been invited as a keynote speaker and panellist to several academic and non-academic conferences and workshops in the Middle East and the UK.

Authors

António Manuel Martins de Almeida holds a PhD from the University of Newcastle upon Tyne. He is currently an associate professor at the Faculty of Social Sciences and the coordinator of the Tourism Observatory at the University of Madeira, and a member of the research group Center of Applied Economics Studies of the Atlantic. His research interests lie in the areas of tourism economics, island economies and regional development. António Almeida has participated in consultancy projects for public and private organizations and has been involved in a number of competitive projects.

Aurkene Alzua-Sorzabal received a Ph.D. in International Tourism from Purdue University. She currently holds a dual affiliation, Nebrija University and Deusto University, and is co-founder of Lurmetrika Labs, a data-driven company. She has led competitive research projects and collaborated with national and international administrations. Now, she leads the research group on Smart Tourism and Innovation at Nebrija University. Her research focuses on tourism, advanced analytics, and smart solutions. Her latest work has been focused on smart tourism destinations and the identification of emerging metrics for advanced modelling in travel and tourism. She is the author of several articles on tourism and information technology.

Alberto Amore is a lecturer in Tourism and Air Travel Management at Solent University, UK. He holds a PhD in Management (University of Canterbury, New Zealand) and an MA in Tourism, Territory and Local Development from the Università degli Studi di Milano-Bicocca in Italy. His research interests include urban planning, urban tourism and urban regeneration, with a focus on post-disaster urban governance and destination resilience.

Pavlos Arvanitis is Senior Lecturer in Aviation Management at the Department of International Business, Marketing and Tourism, University of Bedfordshire. He has over 20 years' research experience in the fields of air transport and tourism and over 10 years' teaching in tourism and air transport related areas. He taught in further education for a number of years prior to moving to higher education. He started his career as a country sales executive in Greece, for a small regional Italian carrier based in Venice, Italy.

Francesca d'Angella is assistant professor in Management in the Faculty of Communication, Public Relations and Advertising in IULM University, Italy where she is the member of the teaching staff of the PhD program in "Communication, Markets and Society". She is also a member of the quality committee of the two-year master degree in Strategic Communication and an Erasmus examiner for the Faculty of Communication, Public Relations and Advertising.

Kadir Çakar is an associate professor at the Faculty of Tourism at Mardin Artuklu University in Turkey. His PhD examined the motivations and experiences of travellers visiting the Gallipoli Peninsula within the context of dark tourism. His main research areas include qualitative research, dark tourism, tourist destination governance, information communication technologies, crisis management, sustainable tourism and sharing economy.

Manuela de Carlo is full professor of Tourism Management, Director of the graduate programs in Tourism and Hospitality and member of Academic Board of PhD in Communication Markets and Society at IULM University Milano, Italy. In 2004 she launched the Master in Tourism Management, the first masters programme in tourism taught in English in Italy, and in 2016 she launched the M.Sc. in Hospitality and Tourism Management, in partnership with the Rosen College of Hospitality Management of the University of Central Florida. Manuela currently teaches tourism management; destination management; managing hospitality and guest service organizations.

Evrım Çeltek Ph.D. is an associate professor at Gaziosmanpaşa University, Zile Dinçerler Tourism Business and Hotel Management College, Turkey. Evrim obtained her MSc in tourism business administration from Sakarya University (Turkey) and her PhD in tourism and hotel management from Anadolu University (Turkey). Her research focuses on tourism marketing. She has several articles, books and chapters about mobile and digital marketing, e-commerce, mobile commerce, advergame, augmented and virtual reality, gamification and electronic customer relationship management.

Diogo Correia is an invited professor at the Department of Economy, Management, Industrial Engineering and Tourism at the University of Aveiro and at the School of Design, Management and Production Technologies,

North Aveiro School in Portugal. He holds a Ph.D. in Management and Industrial Engineering and his research interests and scientific publications cover the areas of smart cities and urban logistics. He has worked as Smart Cities Manager in Ubiwhere Software company in Aveiro, Portugal and is the Co-founder, Board Member and Chief Operating Officer of LUGGit.

Michel Desbordes is an affiliate professor of Sports Marketing at Emylon Business School in Lyon, France, and a marketing professor at the University of Paris-Sud, France, and previously taught in the University of Ottawa, Canada, and the Shanghai University of Sports, China. Dr. Desbordes has published 32 reference books in the field of sports marketing, as well as numerous academic articles. As a media consultant, he is regularly consulted by BFM, France Télévisions, Europe 1, Le Monde and L'Équipe to discuss matters of sports business. Since 2009, he has also been the chief editor of the *International Journal of Sports Marketing and Sponsorship*.

Carlos Romero Dexeus holds a degree in Economics from the Complutense University, an Executive Master in Tourism Management from Instituto Empresa and he is currently a PhD student at Deusto University. At the moment, he is Director of Research, Development and Innovation at SEGIT-TUR, a public agency. He has been the Executive Director of the Affiliate Members of the World Tourism Organization (UNWTO), and General Manager of the UNWTO Themis Foundation. He has extensive experience in the tourism sector internationally, particularly in the fields of smart tourism destinations, entrepreneurship, tourism innovation, travel technology, tourism statistics and public policy instruments, and has participated in projects for the European Commission, UNWTO, EUROSTAT and the Inter-American Development Bank (IDB).

Francisco Femenia-Serra holds a PhD from the University of Alicante. He is currently a lecturer at the Department of Tourism, Nebrija University (Madrid, Spain) and a member of the research group Smarttour-INN. His work focuses on smart tourism and destinations planning, management and marketing, as well as on the intersection between technologies, human behavior and experiences in the travel context. Dr Femenia-Serra has been involved in several competitive research projects and has been a visiting researcher at the University of Surrey and the Salzburg University of Applied Sciences. He frequently collaborates with public innovation, research and development organizations and destinations in Spain.

Tomás Gajdosík is an associate professor at the Department of Tourism, Faculty of Economics, Matej Bel University in Banská Bystrica, Slovakia. His research focuses on smart tourism and tourism information technologies, and deals with the issues of destination management, governance and leadership. He has contributed to several monographs, textbooks and journals.

Luis Felipe Galarza-Cerf is an independent researcher with an MBA in Advanced Project Management from the ESAN Graduate School of Business, in Lima Peru. His thesis was about Smart City Model approaches for the district of Barranco in Lima city. He graduated in Architecture and Urbanism from the Ricardo Palma University in Peru and in Industrial Engineering from the University of Lima in Peru. He has more than ten years of experience in design and coordination of housing, educational and cultural infrastructure projects.

Abbie-Gayle Johnson is an assistant professor of Tourism at The Hong Kong Polytechnic University. She graduated from the University of Technology in Jamaica and earned her MSc in Tourism at Bournemouth University, UK before completing her PhD in Management and Marketing at the University of Nottingham in the UK. Dr Johnson is a past Commonwealth Scholar as well as a Caribbean Hotel and Tourism Association education foundation scholar. Her research interests are in smart tourism, destination management, sharing economy and value co-creation.

Ekaterina Glebova has over 10 years of international experience in marketing, consultancy and business development. She is pursuing her academic interests in research at an intersection of sports and technological transformation at the University Paris Saclay in France. She has published numerous book chapters and articles in peer-reviewed journals (e.g. *Journal of Sport Management and Marketing*, *Frontiers in Psychology*, *Physical Culture and Sport Studies and Research*). Ekaterina holds a few visiting faculty positions, including at the Hungarian University of Sports Science in Hungary and the EDHEC Business School in Nice in France.

Diana Gómez-Bruna holds a Ph.D. in tourism from Nebrija University, a Master in Sustainability and Corporate Social Responsibility, and a Master in Tourism. She currently is the Department Head of Tourism at Nebrija University and a member of the research group on Smart Tourism and Innovation, Smarttour-INN. Her work focuses on governance, smart tourism, destination planning and CSR in tourism. She has participated as a researcher in competitive projects of the national R&D framework: Tourism Intelligence and Innovation Network and the generation of virtual tourism scenarios, among other. She has worked and co-operated with various private companies and international institutions such as the World Tourism Organization.

Rob Law is University of Macau Development Foundation Chair Professor of Smart Tourism and Deputy Director of Asia-Pacific Academy of Economics and Management. He is also Honorary Professor of several other reputable universities. Prior to joining the University of Macau in July 2021, Prof. Law worked in industry organizations and academic institutes, and is an active researcher. He has received 90+ research related awards and accolades

(e.g. recognized as the most prolific tourism/hospitality researcher in the world over two decades from 2000 to 2019 – *International Journal of Contemporary Hospitality Management*, 2021). Prof. Law has edited four books and published 1,000+ research papers (including hundreds of articles in first-tier academic journals). His publications have received more than 55,000 citations, with h-index/i 10-index = 108/489. In addition, Prof. Law serves different roles for 200+ research journals, and is a chair/committee member of more than 180 international conferences.

Wojciech Lewicki currently works at the Department of Economics, West Pomeranian University of Technology, Szczecin in Poland. Wojciech does research in transport economics, EU regulations, automotive market, electromobility, smart-city, vehicle cost based on research related to supply chain management, energy economics, manufacturing automotive systems and transportation engineering. His expertise include transport economics, automotive industry, telematics and logistics.

Eduarne Vidal Lopez Tormos holds degrees in tourism and multilateral project management, specialising in tourism destination development and tourism policy. She is currently Director of the Palacio de la Magdalena Municipal Company in Santander City. She was responsible for SEGITTUR's Smart Tourist Destinations programme, which promotes digital transformation in the sector, coordinating the design of the diagnostic and planning methodology for the development of smart tourist destinations, setting requirements and metrics. She has directed development projects in local tourist destinations, in Spain and abroad and coordinated the Network of Smart Tourist Destinations of the Ministry of Industry, Trade and Tourism of Spain.

Luiz Pinto Machado holds a PhD in Economics from the Universidade Técnica de Lisboa. He is currently an assistant professor at the Faculty of Social Sciences, University of Madeira, with affiliation in the research group CEFAGE, Center for Advanced Studies in Management and Economics (Universidade de Évora). His research interests lie in the areas of tourism economics, island economies and regional development. Luiz has participated in consultancy projects for public and private organizations and has been involved in a number of competitive projects. He is currently executive member of the Tourism Observatory of the University of Madeira, Portugal

Otto Regalado-Pezúa is a full professor of Marketing at ESAN Graduate School of Business in Lima, Peru. He holds a PhD in Management Sciences and a masters degrees in Management Sciences from the IAE at Côte d'Azur University in France, Quantitative Marketing from the IAE at Pierre Mendès-France University, and Business Administration from the ESAN Graduate School of Business, Lima, Peru. He has published chapters in books as well

as articles in many prestigious scholarly journals in the following research lines: digital competencies, tourism management, and higher education.

Jillian Rickly is Professor of Tourism at the Nottingham University Business School in the UK. She is a tourism geographer and has spent much of her career examining the role of authenticity/alienation in tourism motivation and experience. This research has been situated in a variety of tourism contexts: heritage, nature, adventure, dark, among others. She has developed a research agenda related to accessibility and travel behaviour, focused on people with disabilities who have assistance dogs. She examines the role of this human-animal relationship to travel behaviour across the transport, travel and tourism sectors. This has inspired collaborations with Guide Dogs for the Blind and Assistance Dogs UK. She serves as an Associate Editor for the *Annals of Tourism Research* and is on the editorial boards of *Mobilities*, *Tourist Studies*, and *Journal of Qualitative Research in Tourism*.

Leonor Teixeira is an assistant professor of the Department of Economics, Management, Industrial Engineering and Tourism at the University of Aveiro. She is also a researcher at the Institute of Electronics and Telematics Engineering and collaborator at research unit on Competitiveness, Governance and Public Policies of University of Aveiro in Portugal. She has a M.Sc. in Information Management, and a PhD in Industrial Management (Information Systems) from the University of Aveiro, Portugal. She has over 100 publications in peer-reviewed journals, book chapters and proceedings.

Leonardo Toro is a part-time professor in marketing, business and entrepreneurship at ESAN Graduate School of Business, in Lima, Peru. He has a Master in Marketing Science from ESIC and an MBA specialized in Marketing from ESAN. He is a professional in finance and foreign trade, trained at the University of the Chamber of Commerce of Bogotá Uniempresarial, Colombia. He has served as director of the virtual modality in a specialised educational institution in Colombia. He has extensive experience as a consultant in commercial marketing, strategic planning and innovation in the higher education, automotive, services and oil sectors in Colombia and Peru.

Katerina Volchek is a professor and a manager of the DigiHealth & Smart Tourism lab at Deggendorf Institute of Technology. She is an expert in customer experience, information and communication technologies and marketing strategy for tourism, including design of personalised services and optimisation ROI through marketing attribution. Her research interest lies in the capabilities of neuromarketing and smart environments for the service industries. Katerina serves as a Director for Marketing at the International Federation for Information Technologies and Travel & Tourism.