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Matthias Tuczek

Kenan Degirmenci

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*See next page for additional authors*

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**Authors**

Matthias Tuczek, Kenan Degirmenci, Kevin C. Desouza, Richard T. Watson, Tan Yigitcanlar, Veronica Garcia Hansen, Sara Omrani, Keivan Bamdad, and Michael H. Breitner

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# **Toward a Decision Support System for Mitigating Urban Heat**

**Matthias Tuczek**

School of Information Systems  
Queensland University of Technology  
matthias.tuczek@qut.edu.au

**Kenan Degirmenci**

School of Information Systems  
Queensland University of Technology  
kenan.degirmenci@qut.edu.au

**Kevin C. Desouza**

School of Management  
Queensland University of Technology  
kevin.desouza@qut.edu.au

**Richard T. Watson**

Department of Management Information  
Systems, University of Georgia  
rwatson@uga.edu

**Tan Yigitcanlar**

School of Built Environment  
Queensland University of Technology  
tan.yigitcanlar@qut.edu.au

**Veronica Garcia Hansen**

School of Design – Architecture  
Queensland University of Technology  
v.garciahansen@qut.edu.au

**Sara Omrani**

School of Built Environment  
Queensland University of Technology  
s.omrani@qut.edu.au

**Keivan Bamdad**

School of Mechanical, Medical and Process  
Engineering, QUT  
k.bamdadmasouleh@qut.edu.au

**Michael H. Breitner**

Information Systems Institute  
Leibniz Universität Hannover  
breitner@iwi.uni-hannover.de

## **Abstract**

With the continuous rise of global urbanization, city planners and policymakers are increasingly concerned with urban heat islands (UHI), which are metropolitan areas that are significantly warmer than their surrounding rural areas. We address the United Nation's Sustainable Development Goal 11 "Sustainable Cities and Communities," and we design and develop a decision support system (DSS), which will help city planners and policymakers to overcome economic barriers to reach environmental sustainability goals.

## **Keywords**

Urban heat, green information systems, decision support, morphological analysis, policy making.

## **Introduction**

The impacts of climate change on natural hazards such as floods, droughts, and wildfires pose a critical threat to global stability, which are exacerbated by the urban heat island (UHI) effect (Levermore et al. 2018; Mohajerani et al. 2017). City planners are increasingly concerned with UHI, which are metropolitan areas that can cause urban temperatures to be between 2 and 12 degrees Celsius higher than surrounding