



8th
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Academic
Conference on
Places and
Technologies

BOOK OF ABSTRACTS

EDITORS

Aleksandra Djukić
Aleksandra Krstić-Furundžić
Eva Vaništa Lazarević
Milena Vukmirović



Keeping up with technologies to imagine and build together sustainable, inclusive, and beautiful cities

**PLACES AND
TECHNOLOGIES**
2023

**8th International Academic
Conference on Places and Technologies**
Book of Abstracts

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Aleksandra Krstić-Furundžić
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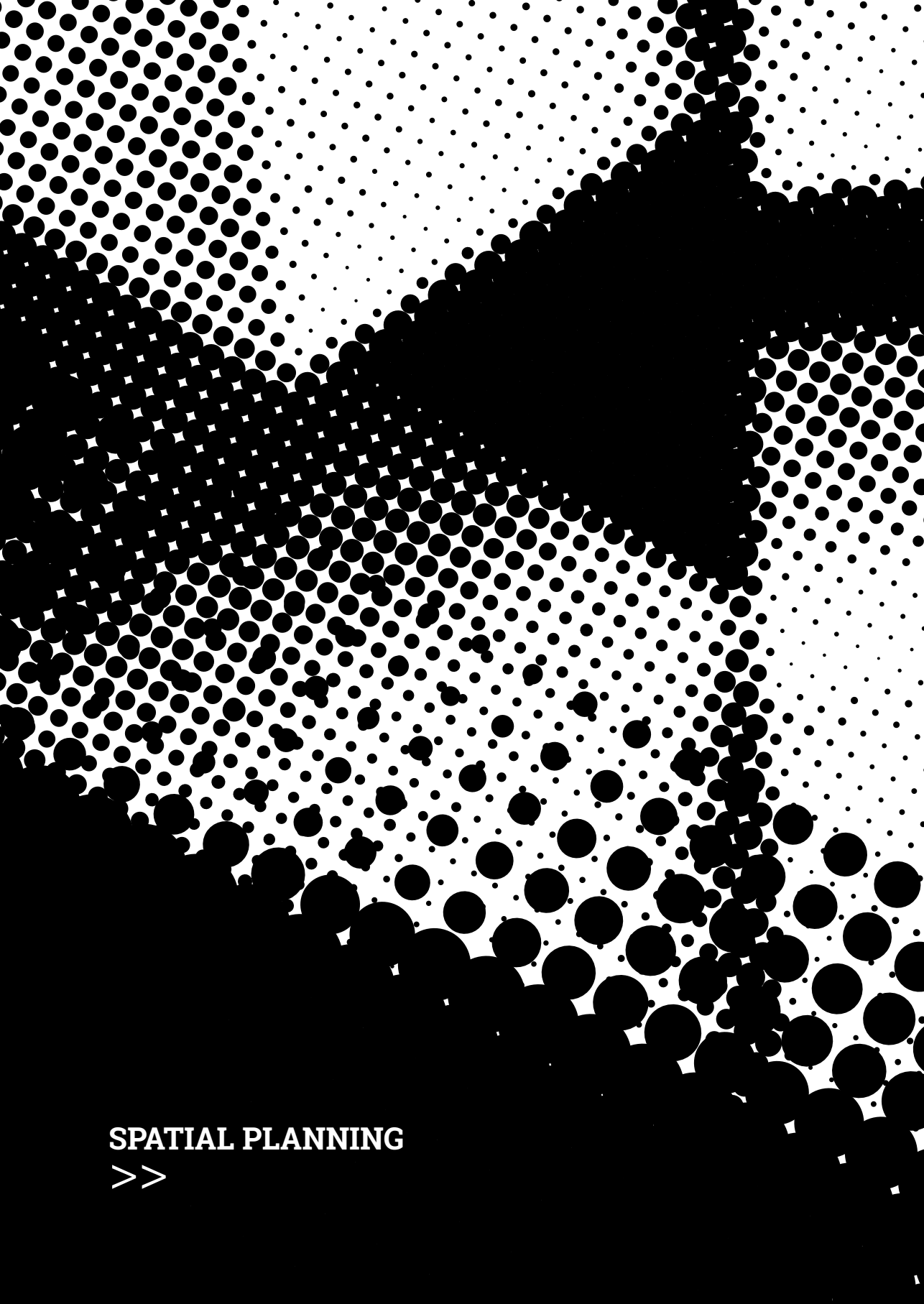
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SPATIAL PLANNING



HEAT FLUX MEASUREMENTS IN DIAGNOSIS OF DEFECTS ON THERMAL ENVELOPE: A CASE STUDY

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ABSTRACT

Measurements of heat flux in order to determine characteristics of thermal envelope have been widely used in performance testing and verification of building quality when it comes to new buildings. They are also used for determining thermal performance characteristics of existing building's thermal envelope components of unknown structure. Through these measurements U value of building envelopes is determined and compared to the one estimated by calculations. This paper presents a case study of an analysis of defects present in the façade wall of an existing building in order to determine its thermal performance characteristics and improvement possibilities. Several spots were measured and respective U values have been determined based on the measured heat flux and temperature values. The results show the influence of numerous parameters on façade wall thermal performance, such as moisture content, shading, usage regime etc.

The conclusions drawn based on these analyses determined the proposed energy rehabilitation and refurbishment measures. Since the analysed building represents one of the typical buildings in residential building stock in Serbia and in the region, these conclusions can serve as valuable information for similar cases.

KEYWORDS *_ heat flux measurements, thermal envelope, energy performance, refurbishment measures*

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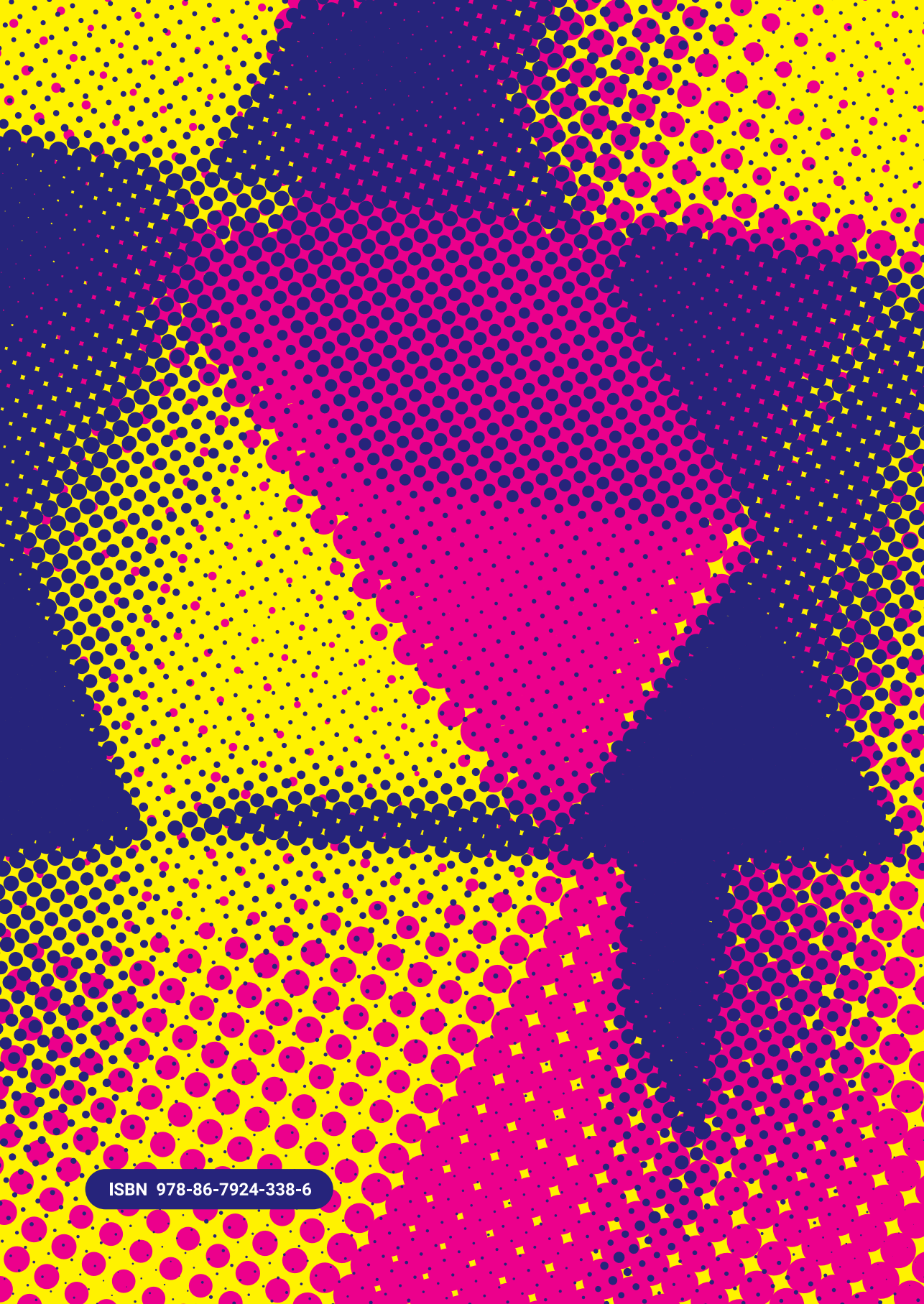
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