



Westpommersche Technische Universität in Stettin

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## Schutz der Stadtlandschaft – Gestaltung der Bauhöhe

Präsentation des polnisch-norwegischen Forschungsprojektes „2TaLL“:  
Application of 3D virtual city models in urban analyses of tall buildings

Landeshauptstadt  
Dresden



**2016.02.29 | 13.00–15.00**

**Dresden, World Trade Center,  
Freiberger str. 39, Room 2302**

## Programm

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13.00 – 14.15

■ **Einführung in das Projekt „2TaLL“ und das Phänomen den Hochgebäuden in Europa**

*Klara Czyńska, Adam Zwoliński*  
(auf Englisch)

■ **Methoden der Stadtanalyse: VIS und VPS – die Idee und Grundlagen – Nutzung während des Planungsprozesses – Anforderungen an die digitalen 3D-Modelle – Präsentation der Studien für Stettin, Lublin, Warschau und Dresden**

*Paweł Rubinowicz*  
(auf Deutsch)

14.15 – 15.00

■ DISKUSSION

■ **Eröffnung der begleitenden Ausstellung: Ausgewählte Ergebnisse des 2TaLL-Projekts**

## Foreword

*on the Spatial Analysis Methods developed within the 2TaLL project*

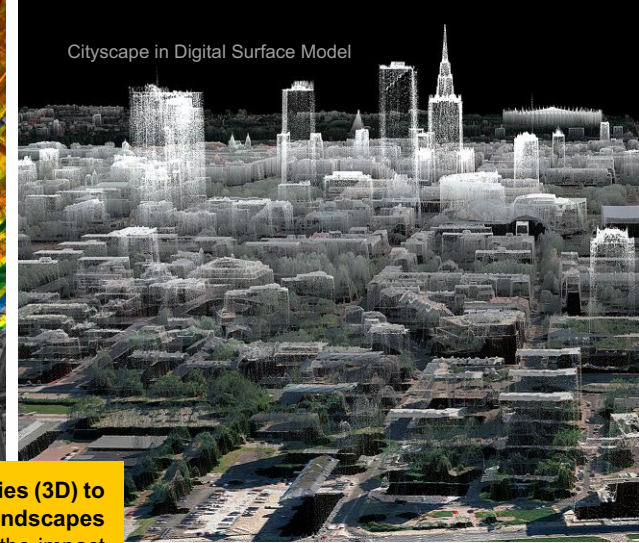
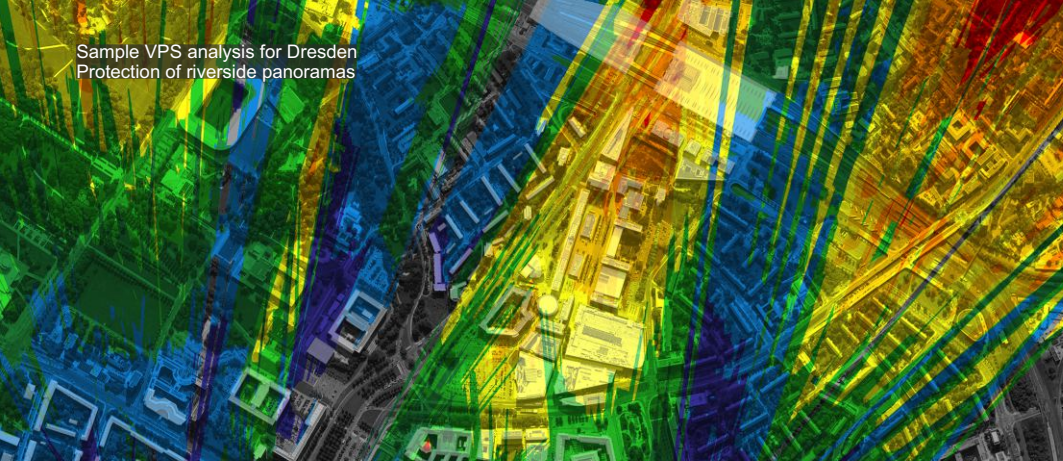
Findings of the 2TaLL research project present a series of new analysis methods that facilitate studies on the impact of new buildings on a city. In particular, visibility studies based on Visual Protection Surfaces provide new opportunities for an urban planning practice that respects historical urban heritage (...). Beside the visibility, the authors also examine qualities of public spaces and the shadowing effect produced by tall buildings in their surroundings. The megatrend of progressing urbanization and the growing need for built-up structures of high density will strongly influence urban development in Europe in the next decades. This emphasizes the necessity for modern digital planning tools as those developed in the 2Tall project.

The integration of the third dimension in the visibility analysis of urban areas enables new and innovative systematical view analyses. The most important one is the comprehensive analysis of buildings visibility which combines the height of a building with its visual impact, namely the Visual Impact Size method. The innovative visualization method is capable of delivering a quantitative analysis in the form of an informative map which shows the visual impact of a building on its urban surrounding as well as its magnitude. A huge advantage is that the analysis is not restricted to selected standpoints but covers all possible points of view in an urban area. For this reason, the visibility analysis is considered comprehensive.

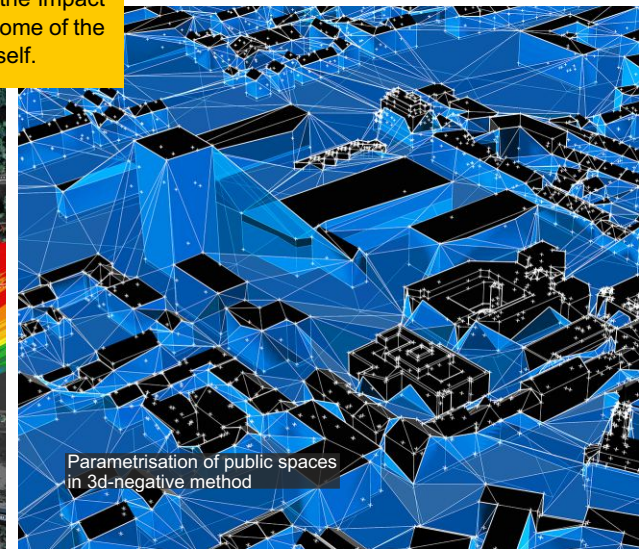
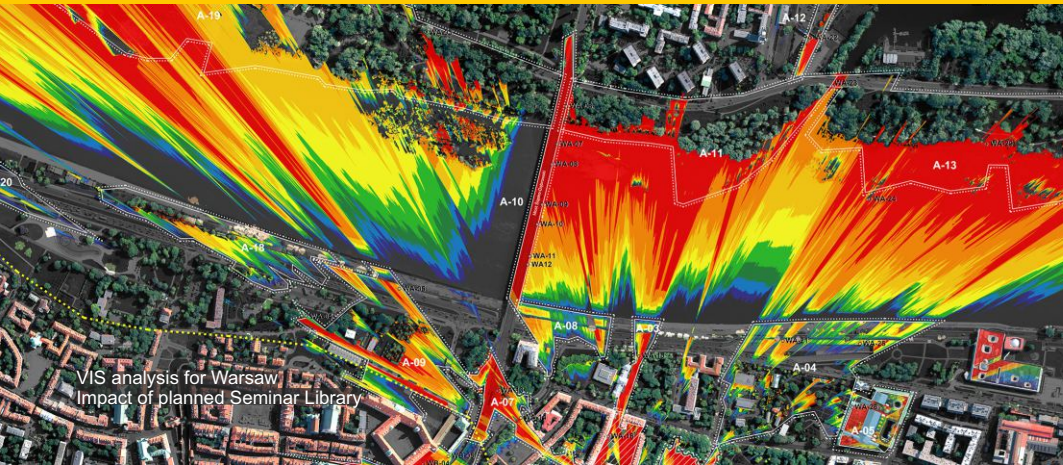
Case studies of such cities as Dresden, Brussels, Munich, Berlin, Frankfurt, Rotterdam, Delft and others provide very good examples of how advanced 3D-city models (including semantic information) can be used. In the years to come, such models will be created for a number of cities all around the world. The architectural research group has not only harnessed astonishing technical skills necessary to develop software for the computation of Visual Protection Surfaces, they also resolved challenges related to various input data types and formats such as Lidar data and CityGML.

The examples provided by the authors of the 2TaLL research project are visually appealing and illustrate the practical application of the method and consequently the huge potential of analysis methods developed. Hopefully, the research team can continue and further their work in this field.

*Prof. Dr. Reinhard Koenig*  
*Bauhaus University Weimar, Computer Science in Architecture*  
*Swiss Federal Institute of Technology Zurich*



**The 2TaLL project examines possibilities and limitations of using virtual models of cities (3D) to provide advanced urban analyses focused on impact simulations of tall buildings on landscapes of European cities.** How the landscape is affecting visibility of building in space? How is the impact changing dependently on urban composition and urban structure of city etc.? Important outcome of the presented subject is an interpretation of basic relationship between tall buildings and the city itself.





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PhD architect, PAWEŁ RUBINOWICZ, studied at the West Pomeranian University of Technology in Szczecin and Fachhochschule Oldenburg (Germany). PhD at Cracow University of Technology in 2011: Chaos as the higher order in selected trends of contemporary architecture. He works at the Institute of Architecture and Spatial Planning at West Pomeranian University of Technology since 1999. Participated in numerous competitions, workshops and architectural conferences in Poland, Germany, Finland, Sweden, Lithuania, Spain, United Kingdom, the United States and South Africa. Author of scientific publications. Co-author of urban studies for several cities in Poland (2005-2016). Coordinator of European projects under the 'Culture 2000' (2003-2004). Individual exhibitions in 10 cities in Poland (2000-2014). In years 2013-2016 participant of 2TaLL research project (within Polish-Norwegian research program) **Contact: [pawel@rubinowicz.com.pl](mailto:pawel@rubinowicz.com.pl)**



PhD architect, ADAM ZWOLIŃSKI, studied at West Pomeranian University of Technology in Szczecin. MSc in Urban Housing Management at University of Lund in Sweden and Institute for Housing and Urban Development Studies in Rotterdam. PhD at Wrocław University of Technology in 2008: Determinants of urban transformation of housing areas on the basis of spatial parameters of public spaces. The case of large panel system housing in Szczecin. He works at the Institute of Architecture and Spatial Planning at West Pomeranian University of Technology since 2003. Author of scientific publications on urban development, urban transformation and space-use problems. Professionally architect associated with FBA design office in Szczecin since 2004. Author and co-author of around 40 architectural and urban projects, competitions, concepts and studies. In years 2013-2016 participant of 2TaLL research project (within Polish-Norwegian research program). **Contact: [azwoliński@zut.edu.pl](mailto:azwoliński@zut.edu.pl)**