

Research Group Heading

EPN

Environmental Pollution Noise Research Group **EPN**
UTP University of Technology and Life Sciences
Faculty of Civil and Environmental Engineering and Architecture
Department of Geomatics, Geotechnics and Spatial Economy
Kaliskiego 7 street
85-796 Bydgoszcz,
Poland

Expressions of Interests

Name of the Group's Leader



Dr hab. eng. Janusz Kwiecień, prof. UTP

The head of Department of Geomatics, Geotechnics and Spatial Economy

Qualifications: 1967 - master degree - Warsaw University of Technology, Faculty of Geodesy and Cartography, Warsaw University of Technology, 1978 - doctor of technical sciences - Faculty of Geodesy and Cartography, Warsaw University of Technology, 1990 - postdoctoral degree (habilitation) - Faculty of Geodesy and Cartography, Warsaw University of Technology.

Discipline science: Civil engineering, geodesy and cartography

Research activity: Improvement of engineering measurements technology using laser, Research concerning the integrated GIS technology (called tele-geoprocessing), Satellite geodesy and navigation, Application of GIS in Engineering, The use of GIS database to create strategic noise maps in 3D

Summary publication after habilitation: 1- monograph national copyright, 1- monograph foreign joint authorship, 5 - monographs joint authorship national, 10 - foreign copyright publications, 10 - national publications copyrights, 21 - foreign joint authorship publications, 22 - national publications of joint authorship

Foreign scientific experience:

- University of Cagliari (Italy) 2 - month scientific internship (1981) at the Institute of Astronomy;
- Delft University of Technology (Netherlands) Department of Geodesy – 11 months scientific internship;
- Technical University of Hannover (Germany) - Institute of Geodesy, several short scientific stays: 1985, 1989, 1990;
- Military University of Munich (Germany) - Institute of Geodesy , 2 months scientific internship 1994;
- Erasmus lectures at the University of Linköping (Sweden) in 2006, (1 week) and 2008 (1 week).

Implementation of projects for practice:

- The city emergency system for the Centre for Emergency in Bydgoszcz- Poland 2004
- The GIS system for education facilities together with tools for demographic analysis

Other scientific activities:

Reviewer of the "Use of GNSS systems in support of the management of the tactical situation during operations of the police services and civil protection services" designated by the Belgian Ministry of Science (The Belgian Federal Science Policy Office)

Names of the Group's Members and their research areas/interests

Dr eng. Kinga Szopińska, assist. prof. UTP at Department of Geomatics, Geotechnical and Spatial Planning.

Qualification: She is specialist in environmental engineering (UTP M.Sc. degree: 2004 – specialization environmental monitoring and 2006 – specialization sanitary equipment). In 2014 she was conferred the doctor's degree on environmental engineering for the thesis "Acoustic Environment in Urban Space Development" (Technical University of Lodz).

Scientific interest: Her scientific interests focus on issues related to environmental engineering, spatial development, property management, protection of urban areas from noise and use of spatial information systems. She is a co-author of the Bydgoszcz acoustic map. She has supervised a number of research projects on influence of acoustic climate upon urban space development and employment of acoustic considerations in sustainable urban building industry. She has been an author/co-author of many scientific articles in renowned domestic and foreign magazines. She has supervised and conducted a lot of research & development projects aimed at improving competitiveness and innovativeness of Polish companies from the Province of Kujawsko-Pomorskie. She's author many consulting services in the field of testing the acoustic climate in selected areas of the city. She's membership in The Bydgoszcz Society of Science and The Polish Real Estate Scientific Society

Dr eng. Malgorzata Krajewska, assist. prof. at Department of Geomatics, Geotechnical and Spatial Planning UTP

Qualification: (1987 - UTP M.Sc. degree: civil engineering). In 2000 she was conferred the doctor's degree on geodesy and cartography for the thesis "*The concept of taking into account the value of the land in shaping the spatial order of the city*" (University of Warmia and Mazury in Olsztyn).

Scientific interest: Property Appraiser, Licence No 821. She is a lecturer for post-graduate studies on property management. She is an author of a number of appraisal studies. Her research focuses on the property market – space development. She is an author and co-author of many publications devoted to property value analysis, appraisal procedures especially those dealing with acoustic circumstances. She has written articles in renowned domestic and foreign magazines.

Certificate: Recognised European Valuer REV-PL/PFVA/2013/172 issued by The European Group of Valuers Associations (TEGoVA) i The Polish Federation of Valuers Associations (PFVA)

- professional construction industry, authorizing them to perform independent functions of head of construction and works G-P-KZ-7342/275/92,
- professional qualifications entitling them to perform independent functions in the specialty construction and building, G-P-KZ-7342/156/94,
- member of the State Qualification Committee for property appraisal,
- member of the Association of Property Appraisals in Bydgoszcz,
- member of the board The Polish Real Estate Scientific Society.

Leading Research Topic of the Group

The main directions of scientific research are the following:

1. Evaluation of the nuisance of noise sources and their environmental impact on acoustic comfort in buildings (objective and subjective methods).
2. The study of the acoustic areas in the vicinity of areas that emit noise, ie. roads with significant traffic, manufacturing facilities and airports.
3. Study of the impact of environmental noise on the attractiveness of the urban (including urban green areas, urban public spaces, areas of recreation and leisure in the cities)
4. Sensitive property valuation taking into account environmental noise

Best Realizations of the Main Research Topic

- The implementation of noise map for Bydgoszcz city – 2008 (co-author Janusz Kwiecień, Kinga Szopińska)
- The concept of procedural solutions to the impact of the acoustic environment on the technical condition of the buildings. Project within Program Human Capital, funded by the European Union (leader of research project – Kinga Szopińska)
- The study of factors affecting the increase acoustic comfort multifamily buildings. Project within Regional Operational Programme Province of Kujawsko-Pomorskie, funded by the European Union (leader of research project – Kinga Szopińska)
- Determination of noise nuisance service facilities operating in areas covered by the Local Land Development Plan. Project within Regional Operational Programme Province of Kujawsko-Pomorskie, funded by the European Union (leader of research project – Kinga Szopińska)
- Spatial analysis of transaction prices of land with regard to planning conditions. Project within Regional Operational Programme Province of Kujawsko-Pomorskie, funded by the European Union (leader of research project – Małgorzata Krajewska, co-author – Kinga Szopińska)
- Spatial analysis of transaction prices of residential property, taking into account the noise level. Project within Regional Operational Programme Province of Kujawsko-Pomorskie, funded by the European Union (leader of research project – Małgorzata Krajewska, co-author – Kinga Szopińska)

General Expression of Interests

Dear Sirs:

We are a research team of the UTP University of Technology and Life Sciences in Bydgoszcz, acting on environmental pollution noise research in the broadest sense of the world.

We are writing to you to explore the possibility to cooperate with us.

Please find more detailed information about our research interests, profiles of group members and the areas of their scientific interests.

We believe that our research could be of interest to the readers of short scientific information about our activity of environmental pollution noise determination.

We are interested in a scientific cooperation in this field and we kindly request you to contact us.

Best Selected Publications

1. Szopińska K., Krajewska M., *Sensitive property valuation taking into account noise aspects*, [in:] “GIS ODYSSEY 2016” Conference proceedings 5th to 9th of September 2016, Perugia, Italy pp. 246-251, 2016

2. Dawidowicz A., Klimach A., Sajnóg N., Lewandowicz E., Kwiecień J., Szopińska K., Łuczyński R., Banaszek A., *New challenges for land information systems in the light of European standards*, Zagreb, Croatia : Croatian Information Technology Society, GIS Forum, ISBN 978-953-6129-47-8, 2015
3. Szopińska K., Krajewska M., *Prices of Apartments in Relation to Noise Level in Poland*, Journal of Civil Engineering and Architecture, Volume 7, No 10, October 2013 (Serial No. 71), pp.1189-1195, 2013
4. Kwiecień J., Szopińska K., *Implementation of the EU Noise Directive in Process of Urban Planning in Poland*, 29th Urban Data Management Symposium / editors: C. Ellul, S. Zlatanova, M. Rumor, R. Laurini, International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XL-4/W1, pp. 45-49, 2013
5. Szopińska K., Kwiecień J., *The Concept of Using the Strategic Noise Maps in Planning of Urban Space in Poland*, Journal of Civil Engineering and Architecture, Volume 7, No. 5, May 2013 (Serial No. 66), pp. 601-608, 2013