

Expressions of Interests (EoI)

I. Research Group Heading

Research group for soil environment – composition, properties, pollution, risk assessment, remediation.

UTP University of Science and Technology,
Faculty of Agriculture and Biotechnology,
Department of Soil Science and Soil Protection,
Bernardyńska St. 6, 85-029 Bydgoszcz, Poland

II. Name of the Group's Leader with a Short BIO (CV).



Hanna Jaworska, Ph.D.

Associate Professor

UTP University of Science and Technology
Faculty of Agriculture and Biotechnology
Department of Soil Science and Soil Protection
Bernardyńska St. 6, 85-029 Bydgoszcz, Poland
Tel.: +48 52 374 95 12

Email: hjawor@utp.edu.pl

Anthropopression assessment.

- 1979-1984- studies on Faculty of Animal Breeding and Biology of UTP University of Science and Technology in Bydgoszcz
- 1984- Master thesis "PRELIMINARY STUDIES ON ENTOMOFAUNA OF FLOWERS OF SELECTED HERBAL PLANTS" accomplished in Department of Zoology
- 1994- PhD degree of agricultural sciences in Faculty of Agriculture and Biotechnology.
- Dissertation under the title "LESSIVE SOILS FORMED FROM SILT DEPOSITS FROM POJEZIERZE CHEŁMIŃSKO-DOBZYŃSKIE AND WYSOCZYŃNA KALISKA REGION", accomplished in Department of Soil Science and Soil Protection.
- 1999- Post-graduate course: HPLC, TLC
- 2008- Post-graduate course of using Atomic Absorption Spectrometry
- 2014- Habilitation thesis „Genesis and properties of agriculturally used Luvisols from the selected areas of Vistulian and Riss glaciations” in agricultural sciences, specialization – soil science
- 2016- associate professor in Department of Soil Science and Soil Protection, UTP.

III. Names of the Group's Members, and Their Research Areas/Interests.



Halina Dąbkowska-Naskręt, Prof.

Full Professor

UTP University of Science and Technology
Faculty of Agriculture and Biotechnology
Department of Soil Science and Soil Protection
Bernardyńska St. 6, 85-029 Bydgoszcz, Poland
Tel.: +48 52 374 95 57

Email: dabkowska@utp.edu.pl

Soil protection and remediation, soil chemistry.

Licensed expert in revitalization of soils and green areas.

Appraiser in remediation of post military areas.



Szymon Różański, Ph.D.

Assistant Professor
UTP University of Science and Technology
Faculty of Agriculture and Biotechnology
Department of Soil Science and Soil Protection
Bernardyńska St. 6, 85-029 Bydgoszcz, Poland
Tel.: +48 52 374 95 26
Email: szymi@utp.edu.pl

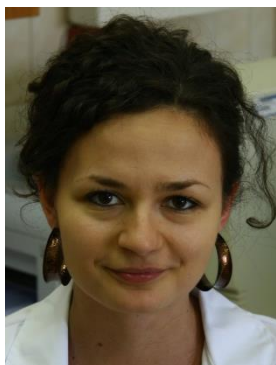
Industrial and urban areas.



Agata Bartkowiak, Ph.D.

Assistant Professor
UTP University of Science and Technology
Faculty of Agriculture and Biotechnology
Department of Soil Science and Soil Protection
Bernardyńska St. 6, 85-029 Bydgoszcz, Poland
Tel.: +48 52 374 95 26
Email: bartkowiak@utp.edu.pl

The impact of extreme factors on soil quality.



Magdalena Rydlewska, MSc.

Scientific specialist
UTP University of Science and Technology
Faculty of Agriculture and Biotechnology
Department of Soil Science and Soil Protection
Bernardyńska St. 6, 85-029 Bydgoszcz, Poland
Tel.: +48 52 374 95 28
Email: magryd@utp.edu.pl

IV. Leading Research Topic of the Group.

- spatial variability of soils and their characteristics,
- chemistry and physics of soils in terms of their functional characteristics and protection,
- the impact of industry and agricultural activity on the soil environment,
- trace elements and their mobility in soils,
- heavy metals in soils under the influence of anthropopression,
- pollution and degradation of soil resources,
- reclamation of degraded soils.

V. Best Realizations of the Main Research Topic (Brief Characteristics or Description).

The assessment of environmental impact and remediation project of outdoor shooting range.
Project financed from the structural funds, Sub-measure 2.3.2 "Innovation vouchers for SMEs" in the 2014-2020 financial perspective of the European Commission.

The quality of soil tare from the sugar plant with regard to its utilization for soil fertilization.
Expertise financed by British Sugar Głinojeck, Sugarpol sp z o.o.

Assessment of the geomechanical transformations occurred after the gas pipeline installation on the selected soil parameters, as the basis for estimating agricultural compensations.
Expertise financed by EuRoPol GAZ s.a.

Risk assessment of the environmental impact of local petroleum and heavy metals ground pollution.
Expertise financed by MMP Neupack Polska Sp. z o.o. - Bydgoszcz

VI. General Expression of Interests.

Soil environment – composition, properties, pollution risk assessment, remediation.

VII. Specific Interests and Additional Topics of Extended Interest.

- the impact of emissions from industry on the environment changes,
- use of different origin wastes for fertilizing, liming and improvement of soil properties,
- the impact of toxic elements and compounds on soils and agricultural products,
- contamination of soils, food and feed by toxic substances of various origin,
- analysis of total content and bioavailable forms of trace elements (Cd, Pb, Cu, Cr, Ni, Zn, Hg, V)

VIII. Other Important Characteristics of the Group.

An experienced team, featuring with the advanced research laboratories and equipment, ready to cooperate with scientists, businessmen and farmers.

IX. Main Group's Achievements.

- *Development of the soil substrate composition intended for the cultivation of willow trees for energetic purposes.*
- *Revitalization of postindustrial area (Mill Island in Bydgoszcz) - assessment of soil degradation, development of remediation methods and application.*
- *Expertise on the impact of A1 highway construction and car traffic on nearby soils. (Financed by the National Agency of Highways Construction.)*

X. Max. 5 Best Selected Publications and/or Other Relevant Accomplishments.

Jaworska H., Dąbkowska-Naskręt H., Różański Sz., 2016: Magnesium, potassium and phosphorus in available forms in Luvisols in the vicinity of Głogów copper smelter, Eurasian Soil Science. 49, 2, 251–256.

Różański Sz., Peñas Castejón J.M., Fernández G.G., 2016: Bioavailability and mobility of mercury in selected soil profiles. Environmental Earth Sciences. 75: 1065.

Bartkowiak A., Breza-Boruta B., Lemanowicz J. 2016: Assessment of the content of heavy metals and potential pathogenic microorganisms in soil under illegal dumping sites. Environmental Earth Sciences, 75(21): DOI 10.1007/s12665-016-6217-x.

Dąbkowska- Naskręt H., Jaworska H., Długosz J. 2014: Assessment of the total nickel content and its available forms in the soils around cement plant Lafarge Poland, International Journal of Environmental Research, 8(1):231-236, Winter 2014 ISSN: 1735-6865.

Jaworska H., Dąbkowska-Naskręt H., Kobierski M. 2016: Iron oxides as weathering indicator and the origin of Luvisols from the Vistula glaciation region in Poland, J. Soils Sediments 16: 396-404, DOI 10.1007/s11368-015-1201-8.