Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)	**Hejmanowska Beata Joanna**
Address(es)	ul. Przemyska 4/10, 31-059 Kraków, Poland
Telephone(s)	+48126173826 Mobile: +48605061510
E-mail	galia@agh.edu.pl
Nationality	Polish
Date of birth	28.05.1962
Gender	Female

Desired employment / Occupational field

Work experience

Dates	30.10.1986 until now
Occupation or position held	at the beginning: assistant, then: assistant professor, Vice-Dean for Science, Cooperation and Development (2008-2009, 2012-2016) now: Head of Department of Photogrammetry Remote Sensing of Environment and Spatial Engineering
Main activities and responsibilities	Education, scientific research
Name and address of employer	AGH - University of Science and Technology al. Mickiewicza 30, 30-059 Kraków, Poland
Type of business or sector	University
Dates	1.10.2012-31.09.2017
Occupation or position held	professor
Main activities and responsibilities	Education, scientific research
Name and address of employer	Kielce University of Technology aleja Tysiąclecia Państwa Polskiego 7, 25-314 Kielce, Poland
Type of business or sector	University
Dates	16.10.2009 -15.10.2011
Occupation or position held	Geomatics specialis, GH40 (grantholder 40, senior scientist)
Main activities and responsibilities	monitoring and high spatial resolution information extraction for agricultural resources
Name and address of employer	European Commission Directorate General, Joint Research Centre Via Enrico Fermi, 2749, 21027 Ispra VA, Italy
Type of business or sector	EC
Dates	10.05.-31.05.1996
Occupation or position held	CEEPUS fellowship
Main activities and responsibilities	Education, PhD Thesis completion
Name and address of employer	Graz University of Technology, Institute of Geodesy, Inffeldgasse 16a, 8010 Graz, Austria

For more information on Europass go to http://europass.cedefop.europa.eu
© European Communities, 2003 20060628

Type of business or sector	University
Dates	01.01.1991 – 30.06.1992
Occupation or position held	Visiting researcher
Main activities and responsibilities	scientific research
Name and address of employer	TU Clauthal Institut für Erdöl- und Erdgastechnik Agricolastraße 10, 38678 Clausthal-Zellerfeld
Type of business or sector	University

Education and training

Dates	9th of February 2017
Title of qualification awarded	Title of full professor
Principal subjects/occupational skills covered	Scientific title given for academic and education purposes to university staff
Name and type of organisation providing education and training	President of Polish Republic
Level in national or international classification	The highest national scientistic level
Dates	2006 postdoctoral examination – Photogrammetry, Remote Sensing and GIS
Title of qualification awarded	
Principal subjects/occupational skills covered	Dissertation: "Data Quality Effect on Risk of Decision Processes Supported by GIS Analyses" (in Polish)
Name and type of organisation providing education and training	AGH - University of Science and Technology al. Mickiewicza 30, 30-059 Kraków, Poland
Level in national or international classification	Professor, exam to qualify for lecturing and independent research
Dates	1997 PhD examination
Title of qualification awarded	PhD Photogrammetry and Remote Sensing
Principal subjects/occupational skills covered	PhD dissertation: “Thermal inertia modelling for soil moisture assessment based on remotely sensed data” (inPolish), supervisor: prof. Z. Sitek
Name and type of organisation providing education and training	AGH - University of Science and Technology al. Mickiewicza 30, 30-059 Kraków, Poland
Level in national or international classification	PhD
Dates	1981-1986
Title of qualification awarded	MSc Eng Geodesy and Cartography, Environmental monitoring
Principal subjects/occupational skills covered	MSc thesis: „Thermovison measurements of laboratory prepared soil samples” (in Polish), supervisor: prof. S.Mularz
Name and type of organisation providing education and training	AGH - University of Science and Technology al. Mickiewicza 30, 30-059 Kraków, Poland
Level in national or international classification	MSc Eng

Personal skills and competences

Mother tongue(s)	**Polish**
Other language(s)	**English, German, French, Russian, Italian**

Self-assessment	Understanding		Speaking		Writing
European level (*)	Listening	Reading	Spoken interaction	Spoken production	

For more information on Europass go to http://europass.cedefop.europa.eu
© European Communities, 2003 20060628

English	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	B2	Independent user
German	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	B1	Independent user
French	B2	Independent user	B1	Independent user	A2	Basic user	A2	Basic user	A1	Basic user
Russian	B2	Independent user	B1	Independent user	A1	Basic user	A1	Basic user	A1	Basic user
Italian	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user

Social skills and competences

team spirit
good ability to adapt to multicultural environments, gained though my work experience abroad and international projects
good communication skills gained through my experience as university teacher

Organisational skills and competences

good experience in project management and scientific research as a tutor of 5 PhD students (all after final examination), PRINCE2® Foundation Certificate in Project Management, 2019, number: GR656109702BH

Technical skills and competences

Computer skills and competences

good command of Office software (word, excel), CAD (Microstation), GIS (ArcGIS, Geomedia, Idrisi, Ilwis, SAGA), Remote Sensing software (PCI Geomatics, Envi, Idrisi, Ilwis, SAGA, SNAP ESA), Postgres, PostGIS, Python, machine learming

Other skills and competences

Driving licence

Category B

For more information on Europass go to http://europass.cedefop.europa.eu
© European Communities, 2003 20060628

Additional information

Papers (selected)

1. Kramarczyk, P; Hejmanowska, B., 2025 -AccuClass: a comprehensive tool for accuracy metrics evaluation in machine learning and remote sensing classification. *SoftwareX. vol. 31 art. no. 102332, s. 1–11,* DOI: *10.1016/j.softx.2025.102332*
2. Hejmanowska B., Michałowska K., Kramarczyk P., Głowienka E., 2023 -The potential of U-Net in detecting mining activity: accuracy assessment against GEE classifiers. *Appl. Sci.* 2025, 2025 — vol. 15 *iss. 17 art. no. 9785, s. 1–37,* DOI: 10.3390/app15179785
3. Hejmanowska, B.; Kramarczyk, P., 2025 Assessing Land Cover Changes Using the LUCAS Database and Sentinel Imagery: A Comparative Analysis of Accuracy Metrics. *Appl. Sci.* 2025, *15*, 240. https://doi.org/10.3390/app15010240
4. Kramarczyk P, Hejmanowska B., 2023 - UNET NEURAL NETWORK IN AGRICULTURAL LAND COVER CLASSIFICATION USING SENTINEL-2, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII-1/W3-2023, 85–90, https://doi.org/10.5194/isprs-archives-XLVIII-1-W3-2023-85-2023, 2023
5. Malczewska, A., Malczewski, J., and Hejmanowska, B.: CHALLENGES IN PREPARING DATASETS FOR SUPER-RESOLUTION ON THE EXAMPLE OF SENTINEL-2 AND PLANET SCOPE IMAGES, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII-1/W3-2023, 91–98, https://doi.org/10.5194/isprs-archives-XLVIII-1-W3-2023-91-2023, 2023.
6. Sobura, S., Hejmanowska, B., Widłak, M., & Muszyńska, J. (2022). The Application of Remote Sensing Techniques and Spectral Analyzes to Assess the Content of Heavy Metals in Soil – A Case Study of Barania Góra Reserve, Poland. Geomatics and Environmental Engineering, 16(4), 187–213. https://doi.org/10.7494/geom.2022.16.4.187
7. Hejmanowska, B.; Kramarczyk P. (2022). Crop Identification Using One-Shot Airborne Hyperspectral Images, 12th EARSeL Workshop on Imaging Spectroscopy in Potsdam
8. Hejmanowska, B.; Kramarczyk, P.; Głowienka, E.; Mikrut, S. (2021). Reliable Crops Classification Using Limited Number of Sentinel-2 and Sentinel-1 Images. Remote Sens. 2021, 13, 3176. https://doi.org/10.3390/rs13163176
9. Hejmanowska, B., Twardowski, M., & Żądło, A. (2021). An Application of the "Traffic Lights" Idea to Crop Control in Integrated Administration Control System. Geomatics and Environmental Engineering, 15(4), 129–152. https://doi.org/10.7494/geom.2021.15.4.129
10. Hejmanowska B. Wężyk P., 2021 (red.) Satellite data for public administration (in Polish), Polska Agencja Kosmiczna, © Copyright by Polska Agencja Kosmiczna 2020
11. Hejmanowska B., Glowienka E., Michalowska K., Mikrut S., Kramarczyk P., Opalinski P., Twardowski M., Guidi G., Gonizzi Barsanti S., Micoli L., Shafqat Malik U., Gonzalez-Aguilera D., Sanchez-Aparicio L.J., Rodríguez-Gonzálveza P.R.,, Muñoz-Nieto A.L., , Mills J., Peppa M.V., 2019 - "The Comparison of the Web GIS Applications Relevant for 4D Models Sharing" - IOP Earth and Environmental Sciences
12. Hejmanowska B., Mikrut S., Struś A., Głowienka E., Michałowska K., - 2018 - "4D models in World Wide Web", 2018 Baltic Geodetic Congress : 21–23 June 2018, Olsztyn: IEEE, cop. 2018. — e-ISBN: 978-1-5386-4898-8.DOI:10.1109/BGC-Geomatics.2018.00007
13. de Kok R., Wężyk P., Hejmanowska B., J. Książek J., 2018 - "Distance to neighbour calculations among OBIA primitives as an innovation to urban mapping techniques" International Journal of Image and Data Fusion ; ISSN 1947-9832. — 2018 vol. 9 iss. 1, pp 21–42
14. Rodríguez-Gonzálvez P., Muñoz-Nieto A.L, del Pozo S., Sanchez-Aparicio L.J, Gonzalez-Aguilera D., Micoli L., Barsanti S.G, Guidi G., Mills J., Fieber K., Haynes J., Hejmanowska B. 2017 - "4D reconstruction and visualization of cultural heritage: Analyzing our legacy through time", The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. 42, Copernicus GmbH
15. Głowienka E., Hejmanowska B., Mikrut S., Kramarczyk P., Struś A., Michałowska K., Opaliński P., 2017, "4D Reconstruction and Visualisation of Krakow Fortress," 2017, Baltic Geodetic Congress (BGC Geomatics), Gdansk, 2017, pp. 1-5, IEEE, DOI: 10.1109/BGC.Geomatics.2017.83
16. Michałowska K., Głowienka E., Hejmanowska B., 2017- "Remote Sensing Methods in the Study of the Impact of Long-Term Process of Sulphur Mining on Environmental Changes of the Carpathian Foreland," 2017 Baltic Geodetic Congress (BGC Geomatics), Gdansk, 2017, pp. 292-296. doi: 10.1109/BGC.Geomatics.2017.80

For more information on Europass go to http://europass.cedefop.europa.eu
© European Communities, 2003 20060628

17. GłowienkaE., Michałowska K., Opaliński P., Hejmanowska B., Mikrut S., Kramarczyk P., 2017 - "Use of LIDAR data in the 3D/4D analyses of the Krakow fortress objects" / IOP Conference Series: Materials Science and Engineering ; ISSN 1757-8981. — 2017 vol. 245 art. no. 042080, doi:10.1088/1757-899X/245/4/042080
18. Hejmanowska B., Głowienka E., Michałowska K., 2016, -"Free Satellite Imagery for Monitoring Reclaimed Sulphur Mining Region Tarnobrzeg", Poland, Geodetic Congress (Geomatics), Baltic, Publisher: IEEE, DOI: 10.1109/BGC.Geomatics.2016.32
19. Hejmanowska B. Głowienka E., Florek-paszkowski, 2016, On-line GIS analysis and image processing for geoportal Kielce/Poland development, int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLI-B2, 197-200, 2016
20. Glowienka,E., Michalowska, K., Pekala, A., Hejmanowska, B., 2016 - "Application of GIS and Remote Sensing Techniques in Multi-temporal Analyses of Soil Properties in the Foreland of the Carpathians." IOP Conference Series: Earth and Environmental Science (EES) - World Multidisciplinary Earth Sciences Symposium, WMESS, 2015 : 5–9 September 2016, Prague, Czech Republic
21. Michalowska, K., Glowienka, E., Hejmanowska, B. 2016 -"Temporal Satellite Images in The Process of Automatic Efficient Detection of Changes of the Baltic Sea Coastal Zone". IOP Conference Series: Earth and Environmental Science (EES) - World Multidisciplinary Earth Sciences Symposium, WMESS 2015 : 5–9 September 2016, Prague, Czech Republic
22. Hejmanowska B., Kamiński W., Przyborski M., Pyka K., Pyrchla J., 2015 - "Modern remote sensing and the challenges facing education systems in terms of its teaching ", Edulearn Proceedings
23. Hejmanowska B., 2013 - "Zastosowanie rozkładu Laplace'a do określania niepewności danych przestrzennych na przykładzie NMT i systemu IACS", Wydawnictwa AGH, Kraków, ISBN 978-83- 7464-649-9
24. Zhu Q. , Hejmanowska B., 2013 - "Analysis of GIS - based spatial variability and risk assessment", Journal of Chemical and Pharmaceutical Research, 2013, 5(9):372-380
25. Zhu Q., Chen J., Ma D., Hejmanowska B., 2012 - "Land suitability evaluation and shelters planning for cities and towns disaster prevention", China Science and Technology Press, 159 pp, ISBN: 978-7-5046- 6028-2
26. Hejmanowska B., Loudjani P., Luckau C., Ganisheva K., 2012 "Maussane study on GNSS measurements: preliminary results", 17th Conference GEOCAP – Tallinn 23-24-25 November 2011 'Geomatics in support of the CAP: towards a sound management of rural land areas', ISBN 978-92-79-26644-7
27. Taşdemir K., Loudjani P., Angileri V., Hejmanowska B, Lucku C., Milenov P., Wirnhardt C., Pizziol P., 2010 – red. JRC Monograph, Geomatics in support of the Common Agricultural Policy, Proceedings of the 16th GeoCAP Annual Conference, 2010, Centro Congressi Giovanni,XXIII, Bergamo 24th-26th November 2010
28. Hejmanowska, B.,Drzewiecki W. Wróbel A., 2008 - ISO5725-2 standard application to verification of orthophoto-based impervious surface area and imperviousness factor determination, The International Archives of the Photogrammetry, Remote sensing and Spatial Information Science, Vol. XXXVII, ISSN 1682-1750
29. Hejmanowska B., 2005 – „Wpływ jakości danych na ryzyko procesów decyzyjnych wspieranych analizami GIS", ISSN 0867-6631, Uczelniane Wydawnictwa Naukowo-Dydaktyczne AGH, Kraków
30. Hejmanowska B., Głowienka E. 2004 - "Hyperspectral remote sensing - a new tool in soil degradation monitoring ", Interdisciplinary International Journal Agribusiness landscape and environment management, Udine, Italy, 2003
31. Hejmanowska B., Głowienka E. – 2003 „Application of GIS (Geographical Information System) in wide-spread publishing of enviromental database for increasing consciousness of citizen", Archiviare Centro Studi di Estimo ed Economia Territoriale, Cagliari , Italy 2003,
32. Hejmanowska B. 2003, - „Application of remote sensing imagery for environmental changes", 4Geokinematischer Tag 15-16 Mai 2003 Freiberg, Velag Gluckauf, Essen, Germany
33. Hejmanowska B. , 2003 – „Data inaccuracy in Geographical Information System - propagation of DTM and ortophotomap errors in the spatial analysis", Geodesy 40: "Godesy, Photogrammetry and Monitoring of Environment", wydawnictwa PAN, Kraków 2003
34. Hejmanowska B. Mularz S. , 2000, - „Integration of multispectral ERS.2 SAR and Landsat TM data for soil moisture assessment" - Int. Archives of Photogrammetry and Remote sensing XVIII ISPRS Congress , Amsterdam, Holland
35. Hejmanowska B., 1998, " Removal of topographical effect from remote sensing data for thermal inertia modeling" WG IV/1, ISPRS Commission IV Symposium: "GIS – Between Vision and Application", September 7-10, 1998, Stuttgart, Germany

For more information on Europass go to http://europass.cedefop.europa.eu
© European Communities, 2003 20060628

36. Hejmanowska B., Mularz S., 1996 „Thermal inertia modelling for soil moisture assessment based on remotely sensed data" Int. Archives of Photogrammetry and Remote sensing XVII ISPRS Congress , Vienna, Austria
37. Hejmanowska B., 1992 "Topographic correction of the remote sensing data". XVII Congress, ISPRS Washington, Commision II, 43-51
38. Mularz S.C., Hejmanowska B., 1990 "Digital processing of remotely sensed data for thermal inertia mapping" - in International Archives of Photogrammetry and Remote Sensing, International Symp. Com. III of ISPRS, „Progress in data analysis", Wuhan, China, May 20-24.
39. Hejmanowska B., 1995 „Beseitigung des topographisches Effektes - praktisches Ergebnisse", Vortrage 15. Wissenschaftlich-Technische Jahrestagung der DGPF Hannover, Deutschland, 4-6 October 1995,
40. Hejmanowska B.,1989 „Attempt for modeling of soil thermal inertia „ 6th Conference on Thermogrammetry and Thermal Engineering, Budapest, Hungary, 31 May - 2 June 1989,
41. Mularz S., Hejmanowska B., 1987 „ Laboratory tests of specially prepared soil samples using AGA Thermovision System", 5th Conference on Thermogrammetry and Thermal Engineering Budapest, Hungary, 8-10 June, 1987

For more information on Europass go to http://europass.cedefop.europa.eu
© European Communities, 2003 20060628

Additional information

Projects (selected):

1. 01.07.2021 – 31.12.2023 Inteligentny system detekcji i monitoringu wyrobisk górniczych z wykorzystaniem systemów satelitarnych i GIS (MineSens), współfinansowany przez Unię Europejską ze środków: Europejskiego Funduszu Rozwoju Regionalnego w ramach Programu Operacyjnego Inteligentny Rozwój. Projekt realizowany w ramach konkursu Narodowego Centrum Badań i Rozwoju: 6/1.1.1/2020 Szybka ścieżka, nr umowy POIR.01.01.01-00-1465/20-00, ekspert
2. 01.10.2020 - 30.06.2023 Zautomatyzowany system precyzyjnych pomiarów objętościowych – VolumeMonit, Narodowe Centrum Badań i Rozwoju, POIR.04.01.04-00-0108/19, ekspert
3. 2020-2022 Integracja danych teledetekcyjnych na potrzeby kontroli w systemie dopłat bezpośrednich do rolnictwa (IACS), Inicjatywa Doskonałości – Uczelnia Badawcza – AGH, kierownik projektu
4. 15.06.2019 – 15.12 2019 The application of hyper-spectral data in the monitoring of agricultural activities of the beneficiaries of the Agency for Restructuring and Modernization of Agriculture (ARMA) and supporting its business processes (access need password) Agency for Restructuring and Modernisation of Agriculture (ARMA) project, expert
5. 15.06.2018 – 15.12 2018 Requirements for expertise in the use of Sentinel 1 and 2 imagery to monitor the agricultural activity of the ARMA beneficiaries, (access need password) Agency for Restructuring and Modernisation of Agriculture (ARMA) project, expert
6. 01.01.2018 – 31.03.2019 AMMER: Automated Method for Measuring Eutrophication of Inland Water Using Remote Sensing, ESA project, team leader
7. 2014-2017 - RID - Development of road innovations, modern methods of soil identification in road engineering, NCBIR (National Center for Research and Development), (in Polish)
8. 12.02 – 30.10. 2017 - External quality control under digitalisation of land parcel identification system, Turkey - Agrotec S.p.A. as Senior LPIS Expert
9. 12.06.2016-30.06.2018 - CHT2 - Cultural Heritage Through Time, project no 013/DSAP-JG/HERITAGEPLUS/2016, Joint Programming Initiative on Cultural Heritage and Global Change: a new challenge for Europe HERITAGE PLUS Call, team leader
10. 30-08.2012 – 31.01.2016 - Sustainable Land and Water Management of Reservoir Catchments (SaLMaR) – Polish German cooperation, team leader
11. 31.07.2007 – 30.11.2007 Processing airborne data to Digital Surface Model and Digital Terrain Model, Joint Research Centre, Ispra, Italy, team leader
12. 22.11.2006 – 31.03.2007 Estimation of the measurement error of parcel areas measured on VHR SAR data, Joint Research Centre, Ispra, Italy, team leader
13. 15.09-15.11.2005 Validation of methods for measurement of land parcel areas – near-VHR imagery supplementary study to the service contract No 22581-2004-12F1SC ISP PL, Joint Research Centre, Ispra, Italy, team leader
14. 30.03.2005 – 30.06.2005 Validation of methods for measurement of land parcel areas UE no 22581-2004-12 F1SC ISP PL, Joint Research Centre, Ispra, Italy, team leader
15. 2002 Airborne spectrometry for abandoned mine site classification and environmental monitoring at the Machów sulphur mine district in Poland – UE project HS2002-PL4, DLR, Germany (in Polish), team leader
16. 2001 Elaboration of assumptions for building up of National Land Parcel Identification System (LPIS) as an element of Integrated Administration and Control System (IACS)" , Samecki 5 – PHARE – PL – PAO/AGR, expert : photogrammetry and GIS

For more information on Europass go to http://europass.cedefop.europa.eu
© European Communities, 2003 20060628