ACADEMIC CV

Name:	**Dorota Anna Krawczyk**
Date of birth:	**1970.09.07**
Place of birth:	**Bialystok, Poland**
Nationality:	**Polish**
Gender:	**female**
Work position:	**Vice-rector for International Cooperation**
Academic title:	**Assoc. Professor**
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Bialystok University of Technology
Faculty of Civil Engineering and Environmental Sciences
Wiejska 45E Str., Bialystok, Poland, www.pb.edu.pl

EDUCATION HISTORY

1992 – Diploma of teacher education of Interfaculty Didactic Study
1994 – Master's degree in Environmental Engineering. Specialization- Sanitary Devices, specialization Heating and Ventilation
2001 – Professional unlimited design license in the field of water supply, sewage, heating, ventilation and gas networks, installations and devices
2005 – Doctoral degree in Technical Science, discipline Environmental Engineering
2018 – Doctor hab. degree in Technical Science, discipline Environmental Engineering

PROFESSIONAL EXPERIENCE

1991- Wageningen Agricultural University, the Netherlands, 2-month scientific fellowship
1992 - University of Cantabria, Spain, 1-month scientific fellowship
1994-2023 - Bialystok University of Technology, Faculty of Civil and Environmental Engineering (assistant, assistant professor, assoc. professor in Department of HVAC systems)
2010-2011 - 9-month fellowship in company Cieploprojekt (Strengthening the potential of science and business staff through the transfer of knowledge in the region)
2012-2013 - 9-month fellowship in company JAZ – BUD Sp. z o.o (Support for cooperation between science and business staff in Podlaskie Voivodeship, co-financed by the European Social Fund)
2014 - Universidad de Cordoba, Spain, 1-month scientific fellowship (Increasing the potential of university as a factor in the industry development based on the knowledge)
2016 - Vilnius College of Technologies and Design, Lithuania, visiting professor
2019 - Kaunas University, Lithuania, 1-month fellowship
2020 - Universidad de Cordoba, Spain, 1-month scientific fellowship
2022 - Universidad de Cordoba, Spain, 1-month scientific fellowship
2012 - **2023** – dozen week internships and study visits in abroad institutions
2020 - **till now** - Vice-rector for International Cooperation of Bialystok University of Technology
2023 - **till now** - Head of Department of Sustainable Construction and Building Systems, Bialystok University of Technology, Faculty of Civil and Environmental Engineering
2023 - **till now** - European Climate Pact Ambassador

MAIN SCIENTIFIC INDICATORS:

- Total IF: 123.625
- H-Index: 11
- Total citations (Scopus): 480

MAIN PROJECTS:

- Coordinator at BUT of European University *Across-European Cross-Border University* 2025-2028 (9 full partners from Banja Luka, Bialystok, Chemnitz, Craiova, Girona, Nova Gorica, Perpignan, Udine, Ruse, and associated partner from Lviv).
- Coordinator of a project *Increasing the energy efficiency of residential and educational buildings in conditions of energy security threats*. Grant No. W/WB-IIL/2/2023 financed from the research subvention provided by the Minister responsible for science, 2023-2025 (University of Bialystok, Lublin and Rzeszow in Poland).
- Coordinator of Task No13&14 *Environmentally Friendly Engineering*, *BUT InterAcademic Partnerships* (PPI/APM/2018/1/00033/DEC/1) NAWA, 2018-2021 (University of Bialystok and Cordoba).
- Team member in R&D Project *Analysis of thermal insulation and energy testing of wall, ceiling and roof elements. Analysis of the influence of the structure of the external casing on the change of the temperature distribution between material layers (*CBR/WBiIŚ/2/2019).
- Project Coordinator Advanced Digital Design course ON modern buildings developing SKILLS for young engineers Erasmus + (2020-1-PL01-KA226-HE-095244), 2021-2023 (University of Bialystok, Cordoba, Florence, Vilnius and Renzekne).
- Project Coordinator *Virtual and Intensive Course Developing Practical Skills of Future Engineer,* Erasmus + Project 2016-1-PL01-KA203-026152, 2016-2019 (University of Bialystok, Cordoba, Vilnius).
- Project deputy coordinator Glocal- innovation future engineers' training for contemporary city's problems. Erasmus+ 2019-1-PL01-KA203-06565 2019-2021(University of Bialystok, Madrid, Klaipeda).
- Coordinator of SPINAKER NAWA project 2021-2023 (various international partners).
- Coordinator of scientific work plan with University of Cordoba, Spain (2016-2024), *The possibility of the renewable energy sources usage in the context of improving energy efficiency and quality of air and water in buildings and civil constructions.*
- Coordinator of scientific work plan with University of Kaunas, Lithuania (2021-2026), *Energy performance of Nearly Zero Energy Buildings (NZEB). Evaluation of the influence of the primary energy factor of renewable energy sources in the methodology for assessing the energy performance of buildings*.
- Coordinator of scientific work plan with University of Florence, Italy (2021-2024) *Low energy buildings using renewable energy sources. Development and retrofitting of the large prefabricated/industrialized building stock in Europe.*
- Contractor - Regional Operational Program of Polaski Voivodeship, 5.2 Development of local environmental protection infrastructure: *Renewable solar energy as a way to improve air purity in the Choroszcz Commune*, 2014.
- Task Coordinator - Regional Operational Program of the Podlaskie Voivodship, *Improving the energy efficiency of the infrastructure of BUT with the use of RES*, 2012 – 2015.

- Contractor - Regional Operational Program of Podlaskie Voivodeship 1.1, *Study of the effectiveness of active and passive methods of improving the energy efficiency of infrastructure using renewable energy sources*, 2012–2015.
- Task Coordinator - central heating installation group and ventilation and energy. INNO - EKO - TECH project *Innovative didactic research center of alternative energy sources, energy - saving construction and environmental protection of Bialystok University of Technology*, 2008-2015.

MEMBERSHIP:

- Polish Chamber of Civil Engineers,
- WSSET World Society of Sustainable Energy Technologies,
- IBPSA International Building Performance Simulation Association,
- SDEWES Sustainable Development of Energy, Water, and Environment Systems Centre,
- EAIE European Association for International Education,
- SDEWES International Center for Sustainable Development of Energy, Water and Environment Systems,
- CBEES Chemical, Biological& Environmental Engineering Society,
- IAENG International Association of Engineers.

REVIEWS:

- More than 200 reviews for journals:
    - Energy and Buildings (Elsevier Science),
    - Applied Energy (Elsevier Science),
    - Energy Conversion and Management (Elsevier Science),
    - Buildings and Environment (Elsevier Science),
    - Applied Sciences (MDPI),
    - Energies (MDPI),
    - Processes (MDPI),
    - Water (MDPI),
    - Polish Journal of Environmental Studies,
    - Entropy,
    - ASHRAE Journal,
    - Sustainability (MDPI),
    - Energy (Elsevier Science),
    - Applied Thermal Engineering (Elsevier Science),
    - Journal of Low Power Electronics and Applications
    - Applied Sciences (MDPI),
    - IOP Conference Series: Earth and Environmental Science,
    - Environmental and Climate Technologies.

- Reviewer and External Member of the International Doctor Award, PhD Examination Committee Assessment – for students in University of Cordoba/Spain, Valladolid/Spain, Florence/Italy, Bolonia/Italy.
- Co-Supervisor of 2 successfully finished Polish thesis, 1 international thesis (after positive reviews waiting final exam in Florence), 3 PhD thesis in progress
- Reviewer of scientific projects (Polish national agencies: NCBR, NAWA, and LIFE – European Commission Programme).

CONFERENCES:

- 85 presentations on onside conferences in Poland, Spain, Italy, Great Britain (including Keynote Speech on Oxford University), Georgia, Portugal, Singapore, the Czech Republic, Austria, Latvia, Lithuania, France and online conferences planned in Japan, China, Dubai and Ukraine while held online due to the Covid-19 pandemic and the war;
- Membership in 42 organizing and scientific committees of conferences in Poland, Italy, Spain, Croatia, Lithuania, Portugal, Singapore, China.

ADDITIONAL PROFESSIONAL ACTIVITIES:

- Head of University Internal Control (2020-2027);
- Member of Senate (2020-2027);
- Member of Section Heating and Air Conditioning of the Polish Academy of Sciences;
- Member of Academic Committee in Polish-Chinese Engineering School (BUT- TCU- CTU);
- Member of the Scientific Council of Journal of the Polish Association of Sanitary Engineers and Technicians;
- Member of various Committees at BUT (doctoral, new study programs, enrolment);
- Coordinator of task *Optimization of Energy Usage and Increase of Renewable Energy Share at BUT*, as a part of strategy "My Green University". The strategy activities have been designed in response to the global challenges of the modern world, which include climate change, air, soil and water pollution, the progressive loss of natural resources, as well as the loss of biodiversity.
- Course completion certificates: „*Prince2 Foundation Certificate in Project Management", "Team Management", "Project Management", "Strategic Management", "Leading of Meetings", "Writing in Science" Stanford University,* several English courses *(like "How to write in English (better)" or "Teaching in English- foreign language"*;
- Participant of various one-day and few-day technical courses in Engineering organized in Poland, Spain, Lithuania, Greece;
- Professional Engineer with unlimited design license in the field of water supply, sewage, heating, ventilation and gas networks, installations and devices BI/38/01.
- Designer of more than 100 HVAC system and energy sources (implemented in Poland);
- Author of more than 40 energy audits for residential and public buildings prepared to order;
- Cooperation with many local and international companies;
- Coordinator of 11 International Interdisciplinary Summer Schools (Effective Solutions for Sustainable Buildings, Eco-Friendly Solutions for Sustainable Buildings).

DIDACTIC:

- 30 years of conducting courses at BUT: Heating Systems, Heating Systems II, Air conditioning, Ventilation systems, Rationalization of Energy Consumption, Seminar, Final Project, Computer-aided engineering;
- Supervisor of over 150 bachelor and master theses;
- Reviewer of over 150 bachelor and master theses;
- Teacher at various courses and postgraduate studies: *Ecological and Energy-efficient Construction; Energy auditor with elements of energy certification of buildings* in Warsaw, Lublin, Olsztyn, Torun, Leba, Bialystok (Poland), 2009-2017;
- Supervisor of international ongoing students (2-12 months trainings).

RESEARCH PROFILE

Solving problems related to air protection, heating, space heating, ventilation and reduction of energy consumption. Energy certification of buildings and the possibility of improving the energy performance of facilities, indoor air quality and application of renewable energy sources. Buildings energy simulation as a tool to optimize technologies used in a way to decarbonization.
Internationalization of higher education. Role of micro-credentials in international mobility. Innovative approaches to teaching of future engineers. Summer schools as a tool for delivering practical skills.

MOST IMPORTANT PAPERS IN JOURNALS:

- Ballerini Vincenzo, Valdiserri Paolo, Krawczyk Dorota Anna, Sadowska Beata, Lubowicka Bernadetta, Rossi di Schio Eugenia: Design, comparison and application of artificial intelligence predictive models based on experimental data for estimating carbon dioxide concentration inside a building. Applied Thermal Engineering, 2025, vol. 261, s.125122. IF(6.1).
- Krawczyk Dorota, Werner-Juszczuk Anna Justyna, Sadowska Beata [i in.], New method of retrofitting of kindergartens resulting in increase of energy self-sufficiency. Energy and Buildings, 2025, vol. 336, s.1-19, IF(6.6)
- Banti Neri, Krawczyk Dorota Anna: Integrating energy simulations and analytical hierarchy process procedure in multi-criteria evaluation of heating systems for industrial buildings. Journal of Building Engineering, t. 95, 2024, s. 1–21, IF(6.7).
- Krawczyk Dorota Anna, Klopotowski Maciej, Gawryluk Dorota, Werner-Juszczuk Anna, Sadowska Beata, Siuta-Olcha Alicja. i in. Evaluation of accessibility of kindergarten playgrounds and outdoor green areas in Polish cities. Journal Design International, 2024, IF(2.6).
- Barkhordari Ali, Karimian Saeed, Shahsavari Sajedeh, Krawczyk Dorota Anna, Rodero Antonio: Influence of the argon admixture on the reactive oxide species formation inside an atmospheric pressure oxygen plasma jet, Scientific Reports, Nature Publishing Group, nr 14, 2024, 3425, s. 1-21, IF(4.6).
- Ołtarzewska Agata, Krawczyk Dorota Anna: Simulation and Performance Analysis of an Air-Source Heat Pump and Photovoltaic Panels Integrated with Service Building in Different Climate Zones of Poland, Energies, MDPI, vol. 17, nr 5, 2024, 1182, s. 1-17, IF(3.2).
- Ballerini Vincenzo, Lubowicka Bernadetta, Valdiserri Paolo, Krawczyk Dorota Anna, Sadowska Beata, Kłopotowski Maciej, di Schio Eugenia Rossi: The Energy Retrofit Impact in Public Buildings: A Numerical Cross-Check Supported by Real Consumption Data, Energies, MDPI, vol. 16, nr 23, 2023, 7748, s. 1-21, IF(3.2).
- Jezierski Walery, Krawczyk Dorota Anna, Sadowska Beata: The Impact of Climate Change and Window Parameters on Energy Demand and CO2 Emissions in a Building with Various Heat Sources, Energies, MDPI, vol. 16, nr 15, 2023, 5675, s. 1-21, IF(3.2).
- Krawczyk Dorota Anna, Sadowska Beata, Kłopotowski Maciej: Selection of a reliable energy source suppling domestic hot water (DHW) system in the kindergarten – a case

study, Ekonomia i Środowisko, Polskie Stowarzyszenie Ekonomistów Środowiska i Zasobów Naturalnych, vol. 87, nr 4, 2023, s. 1-16, IF(0.4).

- Ołtarzewska Agata, Krawczyk Dorota Anna: The Use of Solar Collectors in Domestic Hot Water Systems in Central and Eastern European Countries: Simulation in TRNSYS, Environmental and Climate Technologies, Walter de Gruyter GmbH, vol. 27, 1, 2023, s. 243-253, IF(1.4).
- Rey-Hernández Javier M., Rey-Martínez Francisco J., Yousif Charles, Krawczyk Dorota Anna: Assessing the performance of a renewable District Heating System to achieve nearly zero-energy status in renovated university campuses: A case study for Spain, Energy Conversion and Management, Elsevier Ltd, vol. 292, 2023, 117439, s. 1-13, IF(10.4).
- Barkhordari Ali, Mirzaei Seyed Iman, Falahat Amir, Krawczyk Dorota Anna, Rodero Antonio: Experimental Study of a Rotating Electrode Plasma Reactor for Hydrogen Production from Liquid Petroleum Gas Conversion, Applied Sciences-Basel, MDPI, vol. 12, nr 8, 2022, 4045, s. 1-23, IF(2.7).
- Ołtarzewska Agata, Krawczyk Dorota Anna: Analysis of the Influence of Selected Factors on Heating Costs and Pollutant Emissions in a Cold Climate Based on the Example of a Service Building Located in Bialystok, Energies, MDPI, vol. 15, 23, 2022, 1-13, IF(3.2).
- Šadauskienė Jolanta, Ramanauskas Juozas, Krawczyk Dorota Anna, Klumbytė Eglė, Fokaides Paris A.: Investigation of Thermal Bridges of a New High-Performance Window Installation Using 2-D and 3-D Methodology, Buildings, Stamats Buildings Media, Inc., vol. 12, nr 5, 2022, 572, s. 1-19, DOI:10.3390/buildings12050572, IF(3.8).
- Teleszewski Tomasz Janusz, Krawczyk Dorota Anna, Fernandez-Rodriguez Jose Maria, Lozano-Lunar Angélica, Rodero Antonio: The Study of Soil Temperature Distribution for Very Low-Temperature Geothermal Energy Applications in Selected Locations of Temperate and Subtropical Climate, Energies, MDPI, vol. 15, 9, 2022, 1-19, IF(3.2).
- Ołtarzewska Agata, Krawczyk Dorota Anna: Simulation of the Use of Ground and Air Source Heat Pumps in Different Climatic Conditions on the Example of Selected Cities: Warsaw, Madrid, Riga, and Rome, Energies, vol. 14, nr 20, 2021, 6701, s. 1-11, IF(3.252).
- Teleszewski Tomasz Janusz, Żukowski Mirosław, Krawczyk Dorota Anna, Rodero Antonio: Analysis of the Applicability of the Parabolic Trough Solar Thermal Power Plants in the Locations with a Temperate Climate, Energies, vol. 14, 11, 2021, 1-19, IF(3.252).
- Krawczyk Dorota Anna, Żukowski Mirosław: Experimental verification of the CO2 and temperature model, International Journal of Ventilation, vol. 19, 2, 2020, 127-140, IF(1.595).
- Tamašauskas Rokas, Šadauskienė Jolanta, Krawczyk Dorota Anna, Medelienė Violeta: Analysis of Primary Energy Factors from Photovoltaic Systems for a Nearly Zero Energy Building (NZEB): A Case Study in Lithuania, Energies, vol. 13, 16, 2020, 1-14, IF(3.004).
- Tejero-González Ana, Rey Martinez F.Javier., Martín-Sanz García J.R., Velasco E., Krawczyk Dorota Anna. Improved Performance of a PV Integrated Ventilated Façade at an Existing nZEB Energies 2019, 12(15), 3033, IF(2.707).
- Tamašauskas Rokas, Šadauskienė Jolanta, Bruzgevičius P., Krawczyk Dorota Anna Investigation and Evaluation of Primary Energy from Wind Turbines for a Nearly Zero Energy Building (nZEB)Energies 2019, 12(11), 2145; IF(3.004).

- Teleszewski, Tomasz.; Krawczyk, Dorota Anna; Rodero, Antonio. Reduction of heat losses using quadruple heating pre-insulated networks: A case study. Energies, 2019, 12, 4699. IF(3.004).
- Krawczyk Dorota Anna, Żukowski Miroslaw, Rodero Antonio. Efficiency of a solar collector system for the public building depending on its location. Environmental Science and Pollution Research ISSN 0944-1344 Vol. 26, nr 22 (2019) s. 1-10 IF(3.056)
- Rodero Antonio, Krawczyk Dorota Anna. Carbon Dioxide Human Gains—a New Approach of the Estimation, w: Sustainability, vol. 11, nr 24, 2019, ss. 1-12, 7128 IF(2.592)
- Krawczyk Dorota Anna, Gładyszewska-Fiedoruk Katarzyna, Gajewski Andrzej, Rodero Antonio: CO2 concentration in naturally ventilated classrooms located indifferent climates — Measurements and simulations, Energy and Buildings, Elsevier S.A., vol. 129, 2016, 491-498 IF(2.884)
- Krawczyk D.A Theoretical and real effect of the school's thermal modernization — A case study, w: Energy and Buildings, vol. 81, 2014, 30-37 IF(2.884)
- Gładyszewska-Fiedoruk K., Krawczyk D.A Empirical study on a coefficient of discharge μ from the flexible ducts, w: Energy and Buildings, vol. 82, nr 10, 2014, 187-193, IF(2.884)
- Gładyszewska-Fiedoruk K., Krawczyk D.A The possibilities of energy consumption reduction and a maintenance of indoor air quality in doctor's offices located in north-eastern Poland, w: Energy and Buildings, vol. 85, nr 8, 2014, 235-245, IF(2.884)

MOST IMPORTANT BOOKS:

- Krawczyk Dorota (Editor), Sustainable buildings. Designing and management of cost-effective and eco-friendly systems. Oficyna Wydawnicza Politechniki Białostockiej, 211 s., ISBN 978-83-67185-28-8. DOI:10.24427/978-83-67185-29-5 https://pb.edu.pl/oficyna-wydawnicza/wp-content/uploads/sites/4/2022/12/Sustainable_buildings_2-1.pdf (4566 times downloaded from ResearchGate)
- Krawczyk Dorota (Editor), Sustainable Buildings. Development of Low Energy and Eco-Friendly Constructions. Oficyna Wydawnicza Politechniki Białostockiej, 238 s., ISBN 978-83-67185-23-3, ISBN 978-83-67185-24-0 (eBook), DOI: 10.24427/978-83-67185-24-0 https://pb.edu.pl/oficyna-wydawnicza/wp-content/uploads/sites/4/2022/12/Sustainable_buildings_1.pdf (501 times downloaded from ResearchGate)
- Gawryluk D., Krawczyk D.A. (Editors) 2021. Future of the city. ISBN: 978-83-66391-61-1 eISBN:978-83-66391-62-8 DOI: 10.24427/978-83-66391-62-8
- Krawczyk D.A. (Editor), Buildings 2020+. Constructions, materials and installations. ISBN: 978-83-65596-70-3 / 978-83-65596-71-0 (eBook)DOI: 10.24427/978-83-65596-71-0. (6250 times downloaded from ResearchGate)
- Krawczyk D.A. (Editor), 2019. Buildings 2020+. Energy sources. ISBN: 978-83-65596-72-7/978-83-65596-73-4(eBook) DOI: 10.24427/978-83-65596-73-4 (2129 times downloaded from ResearchGate)
- Gładyszewska-Fiedoruk K., Krawczyk D.A The microclimate of office spaces. Empirical and survey research - a case study : Rozprawy Naukowe. Biblioteka Nauk o Inżynierii

Środowiska/ Politechnika Białostocka, nr 267, 2015, Białystok, Oficyna Wydaw. Politechniki Białostockiej, 120 (in Polish)

- Krawczyk D.A, Biernacka B. Measurements in Heating Systems, 2015, Białystok, Oficyna Wydawnicza Politechniki Białostockiej, 120 s., ISBN 978-83-62582-75-4 (in Polish)
- Krawczyk D.A., Energy Certyfication of buildings Oficyna Wydawnicza Politechniki Białostockiej, 2011 (in Polish)
- Pieńkowski K., Krawczyk D.A., Tumel W. Heating part 1, part 2 Oficyna Wydawnicza Politechniki Białostockiej, 1999 (in Polish).

Bialystok, 13.04.2025