

Dr Jakub Drewnowski, P.E., IWA Member
Assistant Professor
Department of Civil & Environmental Engineering
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Age: 36 years old

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I. Education and Training

- 2017 Training IWA+IEMSS** “3rd Advanced Course Innovative wastewater treatment and mathematical modelling” University of Palermo, ITALY
- 2016 KGHM Cuprum Research & Development Centre, Mine Water Treatment Technologies under EU project SUSMIN** “Tools for sustainable gold mining EU”, Wrocław POLAND
- 2015 Technical Tour to Factory “Conducta” and Training by Endress+Hauser Group,** “Advanced Course of Control, Measurement Equipment and Analytical Measurements in Water/Wastewater Systems” Dresden, GERMANY
- 2015 Seminar, University of Bergen** “Mind the Gap in the Chain Rule: Software Tool Support for Advanced Algorithmic Differentiation of Numerical Simulation Code”, Bergen, NORWAY
- 2014 Training, DEX Summer School** “Advanced course on wastewater treatment and drinking water”, Linz, AUSTRIA
- 2012 Ph.D.**, Civil and Environmental Engineering, Gdansk University of Technology, POLAND
- 2009 Registered Professional Engineer**, No: POM/0233/PWOS/09, Gdansk, POLAND
- 2009 Training**, Centro Soluciones Ambientales “ALQIMIA”, Daimiel, SPAIN
- 2005 M.Sc.**, Civil and Environmental Engineering, Gdansk University of Technology, POLAND
- 2004 Training**, “SAUR” Neptun Gdansk Water-Sewage System Company, POLAND

II. Professional Experience

- 2017 - IWA Member and Young Water Professionals Polish Chapter Chair**
- 2017 - Organization of IWA Workshop "Successful proposals for individual and project fundraising"** 1st IWA Polish Young Water Professionals Conference Cracow, POLAND
- 2017 - Co-Chairman of Organizing Committee** 1st IWA Polish Young Water Professionals Conference Cracow, POLAND
- 2016 – Organization of IWA WEBINAR “Grants, Funding & More – 9th IWA Young Water Professionals Conference Eastern Europe in Budapest, HUNGARY**
- 2016 – Co-Chairman of Organising Committee** 8th IWA Young Water Professionals Conference Eastern Europe in Gdansk, POLAND
- 2015 – Organization of IWA Workshop „How to apply, present and write paper”** 7th IWA YWP for Eastern European Region in Belgrad, Serbia
- 2014 - Individual Teaching Programme** for Teaching Staff Mobility at the LPP - Erasmus Programme, University of Valencia, SPAIN
- 2012 - present Post-graduate PhD, currently working as Assistant Professor**, Faculty of Civil and Environmental Engineering, Gdansk University of Technology, POLAND
- 2012 - Ph.D.**, Department of Civil and Environmental Engineering, Gdansk University of Technology, POLAND
- 2009 - 2012 Assistant**, Department of Civil and Environmental Engineering, Gdansk University of Technology, POLAND
- 2006 - 2011 Doctoral Study**, Department of Civil and Environmental Engineering, Gdansk University of Technology, POLAND
- 2009 Ph.D. Student, Erasmus “Practice” Programme**, University of Castilla La Mancha, Ciudad Real, SPAIN

2005 - 2009 Assistant Environmental Engineer, Development and Research Center “UNITEX” and A.B. Projekt, POLAND

2005 Partial Study, Socrates-Erasmus Programme, University of Palermo, Sicily, ITALY

2004 - 2005 Pilot Plant Study, “Lipce” Water Treatment Plant, “SAUR” Neptun Gdansk, POLAND

2000 - 2005 Master Science Study, Department of Civil and Environmental Engineering, Gdansk University of Technology, POLAND

III. Research Projects

2016-2017 “*Computer-aided optimization of activated sludge process on the example of the wastewater treatment plant*” Ministry of Science and Higher Education targeted project to maintain research potential and the development of young scientific staff of Faculty of Civil Environmental and Engineering Gdansk University of Technology. **Principal investigator**

2015-2016 “*Mathematical modeling and computer simulation of activated sludge processes using specialized software GPS-x*” Ministry of Science and Higher Education targeted project to maintain research potential and the development of young scientific staff of Faculty of Civil Environmental and Engineering Gdansk University of Technology. **Principal investigator**

2013-2015 “*The Center for Advanced Studies – the development of interdisciplinary doctoral studies at the Gdansk University of Technology in the key areas of the Europe 2020 Strategy*” (POKL 04.03.00-00-238/12) co-financed by the European Union within the European Social Fund – Human Capital Operational Programme Priority IV, Measure 4.3. – **Principal investigator of own research task (Coordinator prof. J. Sawicki)**

2010-2013 “*Innovative carbon source for denitrification process support in municipal wastewater treatment plants*” – European Regional Development Fund within the framework of the Innovative Economy Operational Programme 2007-2013, the project no. UDA-POIG.01.03.01-22-140/09-01. **Investigator (Principal investigator - prof. J. Małkinia)**

2009-2012 „*The effect of slowly biodegradable substrate on the kinetics of biochemical processes in activated sludge bioreactors*” – Polish Ministry of Science and Higher Education under the grant no. N-523-422-437. **Principal investigator (Advisor PhD Thesis - prof. J. Małkinia)**

2007-2010 “*New methods for emission reduction of selected pollutants and application of byproducts from wastewater treatment plants*” Task 3: „Characterization and bioavailability of nitrogen fractions in the effluents from municipal wastewater treatment plants” – Norwegian Financial Mechanism, the project no. PL0085-SGE-00153-E-V2-EEA FM. **Investigator (Principal investigator prof. J. Małkinia)**

2007-2010 „*Computer-assisted optimization of nitrogen removal in municipal wastewater treatment plant „Gdańsk-Wschód*” – Polish Ministry of Science and Higher Education, the project no. N523 069 32/2871. **Investigator (Principal investigator - prof. J. Małkinia)**

2007-2009 *Transformations and removal potential of dissolved organic nitrogen in biological nutrient removal (BNR) activated sludge systems - Water Environment Research Foundation (WERF) Research Program (USA) “Efficient, Cost-Effective Nutrient Removal from Wastewater – Limit of Treatment N Removal Issues”* – Polish Ministry of Science and Higher Education, the special project no. WERF/45/2007. **Investigator (Principal investigator - prof. J. Małkinia)**

IV. Recent Award/Scholarship

2017 The Best Raport Award during the 20th International Youth Scientific and Environmental Safety Forum of the Baltic Sea Region Countries “ECOBALTICA”, Russia

2016 The 1st Degree Individual Award from Rector of Gdansk University of Technology for Didactic Achievements

2016 The 2nd Degree Joint Award from Rector of Gdansk University of Technology for Organizing Achievements

2015 Award for a Achievements of Young Scientists awarded by Rector of Gdansk University of Technology, Gdansk (Poland)

2014 Award for a Achievements of Young Scientists awarded by Rector of Gdansk University of Technology, Gdansk (Poland)

2014 Award for the best engineering thesis mentoring using Computer Design Software ArCADia - 3D BIM in the 4th Edition of the annual prize of INTERsoft Competition.

2013- 2015 The IWA Financial Assistance Scholarship Award by “The Center for Advanced Studies – the development of interdisciplinary doctoral studies at the Gdansk University of Technology in the key areas of the Europe 2020 Strategy” (POKL 04.03.00-00-238/12) co-financed by the European Union within the European Social Fund – Human Capital Operational Programme Priority IV, Measure 4.3.

2013 Award for a Achievements of Young Scientists awarded by Rector of Gdansk University of Technology, Gdansk (Poland)

2013 The annual prize of Gdańsk Scientific Society and the President of the City of Gdansk for young researchers in the field of engineering science for a series of publications on mathematical modeling hydrolysis of slowly biodegradable substrate based on studies of the kinetics of biochemical processes occurring in activated sludge systems

2012 Award for INNOVATION 2012 organized as part of the third edition of Fair "TECHNICAL-INNOVATION - Industrial Technology, Science and Innovation", Gdańsk, Poland.

2011 Award for a Achievements of Young Scientists awarded by Rector of Gdansk University of Technology, Gdansk (Poland)

2010 The IWA Financial Assistance Scholarship Award for the IWA 5th International Young Water Professionals Conference 2010, Sydney (Australia).

2010 The Best Poster Presentation Award (*III Prize in Young Researchers Session - B/M 2*) during the 8th International (Alexander von Humboldt) Congress Societas Humboldtiana Polonorum, “World Without Borders – Science Without Borders”, Torun (Poland).

2009 The European Union Financial Support Award from the European Social Fund under the project of the Pomorskie Voivodeship "InnoDoktorant-Scholarships for Ph.D. students, II edition", Gdansk (Poland).

2009 The Financial Support from the Polish Ministry of Science and Higher Education under the grant no. N-523-422-437, Warsaw (Poland).

2008 The Best Platform Presentation Award during the 7th International Youth Scientific and Environmental Safety Forum of the Baltic Sea Region Countries “ECOBALTICA 2008”, St. Petersburg (Russia).

V. Expert Experience

2016 Scientific Committee Member - The 5th IWA/WEF Wastewater Treatment Modelling, Annecy, France (<https://wwtmod2016.irstea.fr/>)

2016 Scientific Committee Member – 9th IWA Young Water Professionals Conference Eastern Europe in Budapest, HUNGARY (<https://iwa-ywp.eu/>)

2016 Invited as an Expert in Scientific Course "In Rust We Trust" organizing by Student Association "BEST", Gdansk University of Technology, Gdansk, POLAND

2014 Invited to participate as a Keynote Speaker in the summer school / workshop „Interfacial phenomena in Theory and Practice” IX Scientific Workshop for Postgraduate Students, Sudomie, POLAND

2012 Invited to participate as a Member of International Ph.D. Defence Tribunal at the University of Castilla La Mancha, Ciudad Real, SPAIN

VI. Language Skills

English and Spanish – very good

Italian – basic

VII. List of Publications

Ph.D. Thesis (2012) „*The effect of slowly biodegradable substrate on the kinetics of biochemical processes in activated sludge bioreactors*” – Polish Ministry of Science and Higher Education under the grant no. N-523-422-437. Awarded by Gdansk Scientific Society and the President of the City of Gdansk (in English)

A. Peer-Reviewed Publications

- 1. Drewnowski, J., Rusek K.** „Technologie komputerowego wspomaganie projektowania BIM w procesie kształcenia współczesnego inżyniera branży sanitarnej”. Zeszyty Naukowe Wydziału Elektrotechniki i Automatyki Politechniki Gdańskiej nr 52, 2017 r s. 25-31 (in Polish)
- 2. Drewnowski, J., Fernandez-Morales F. J.** (2016). Heterotrophic Anodic Denitrification in Microbial Fuel Cells. *Sustainability* 561 (8), 318-324
- 3. Szaja A., Lagód G., Drewnowski J., Sabba F.** (2016). Bioaugmentation of a sequencing batch reactor with Archaea for the treatment of reject water. *Journal of Water Chemistry and Technology* 38 (4) : 238-243
- 4. Kopec L., Drewnowski J., Kopec A.** (2016). The application of moving bed biofilm reactor to denitrification process after trickling filters. *Water Science and Technology* 74 (12) 2909-2916

5. **Drewnowski, J.** (2016) Zastosowanie komputerowej symulacji w procesie kształcenia inżyniera branży sanitarnej. Zeszyty Naukowe Wydziału Elektrotechniki i Automatyki Politechniki Gdańskiej nr 48, 2016 r s. 17-22 (in Polish)
6. **Drewnowski J.** (2016). Modelowanie matematyczne w procesie oczyszczania ścieków metodą osadu czynnego. Kurier WOD-KAN nr 1/2016, s. 8-9. (in Polish)
7. **Drewnowski, J.**, Tuszynska A. (2015) Komputerowe wspomaganie projektowania w procesie kształcenia współczesnego inżyniera branży sanitarnej. Zeszyty Naukowe Wydziału Elektrotechniki i Automatyki Politechniki Gdańskiej nr 2, 2015 r s. 4-8 (in Polish)
8. **Drewnowski, J.** (2014). THE IMPACT OF SLOWLY BIODEGRADABLE ORGANIC COMPOUNDS ON OXYGEN UPTAKE RATE IN ACTIVATED SLUDGE SYSTEMS. Water Science and Technology 69 (6), 1136-1144 (9).
9. **Drewnowski J.** (2014). ROLA KOLOIDALNYCH I ZAWIESINOWYCH ZWIĄZKÓW ORGANICZNYCH W TECHNOLOGII OCZYSZCZANIA ŚCIEKÓW METODĄ OSADU CZYNNEGO Z BIOLOGICZNYM USUWANIEM ZWIĄZKÓW BIOGENNYCH. Inżynieria Morska i Geotechnika nr 6, s. 568-574. (in Polish)
10. **Drewnowski, J.** , Mąkinia., J. (2014). THE ROLE OF BIODEGRADABLE PARTICULATE AND COLLOIDAL ORGANIC COMPOUNDS IN BIOLOGICAL NUTRIENT REMOVAL ACTIVATED SLUDGE SYSTEM. International Journal of Water Science and Technology 11 (7), 1973-1988 (16).
11. **Drewnowski, J.** , Mąkinia., J. (2013). MODELING HYDROLYSIS OF SLOWLY BIODEGRADABLE ORGANIC COMPOUNDS IN BIOLOGICAL NUTRIENT REMOVAL ACTIVATED SLUDGE SYSTEMS. Water Science and Technology 67 (9), 2013 r., 2067-2074 (8).
12. **Drewnowski J.** (2013). WPŁYW WEWNĘTRZNYCH ŹRÓDŁA WĘGLA ORGANICZNEGO NA EFEKTYWNOŚCI USUWANIA ZWIĄZKÓW BIOGENNYCH METODĄ OSADU CZYNNEGO. Inżynieria Morska i Geotechnika nr 2, s. 106-109. (in Polish)
13. Swinarski, M., Mąkinia, J., Czerwionka, K., Chrzanowska, M., **Drewnowski, J.** (2012). MODELING EXTERNAL CARBON ADDITION IN COMBINED N-P ACTIVATED SLUDGE SYSTEMS WITH AN EXTENSION OF THE IWA ACTIVATED SLUDGE MODELS. Water Environment Research, 84 (8), 646-655 (10).
14. Mąkinia J., **Drewnowski J.**, Swinarski M., Czerwionka K., Kraszewska M., Majtacz J. (2012). „THE IMPACT OF PRECIPITATION AND EXTERNAL CARBON SOURCE ADDITION ON BIOLOGICAL NUTRIENT REMOVAL IN A FULL-SCALE ACTIVATED SLUDGE SYSTEM – EXPERIMENTAL INVESTIGATION AND MATHEMATICAL MODELING”. Water Practice and Technology, vol 7, No 1

15. Mąkinia J., Swinarski M., Czerwionka K., **Drewnowski J.**, Kraszewska M., Majtacz J., Angowski M. (2011). „KIERUNKI ROZWOJU TECHNOLOGII OCZYSZCZANIA ŚCIEKÓW POD KĄTEM SPEŁNIENIA ZAOSTRZONYCH WYMAGAŃ W ZAKRESIE USUWANIA AZOTU” Inżynieria Morska i Geotechnika nr 2, s. 125-135, (11). (in Polish)
16. **Drewnowski, J.**, Mąkinia., J. (2011). THE EFFECT OF COLLOIDAL AND PARTICULATE ORGANIC COMPOUNDS ON DENITRIFICATION AND EBPR IN A FULL-SCALE ACTIVATED SLUDGE SYSTEMS. Water Science and Technology, 63 (2), p. 318-324 (8).
17. Mąkinia J., **Drewnowski J.**, Swinarski M., Czerwionka K., Kraszewska M., Majtacz J. (2010). „WEWNĘTRZNE I ZEWNĘTRZNE ŹRÓDŁA WĘGLA ORGANICZNEGO DLA WSPOMAGANIA EFEKTYWNOŚCI PROCESU DENITRYFIKACJI” jubileuszowe wyd. dwumiesięcznika „Inżynieria Morska i Geotechnika” nr 2, 2010 r., 125-135 s. 11. (in Polish)
18. Swinarski, M., Mąkinia, J., Czerwionka, K., Chrzanowska, M., **Drewnowski, J.** (2009). COMPERISON OF THE EFFECTS OF CONVENTIONAL AND ALTERNATIVE EXTERNAL CARBON SOURCES ON ENHANCING THE DENITRIFICATION PROCESS. Water Environment Research, 81 (9), 896-906 (11).
19. Mąkinia, J., Stensel, H.D., Czerwionka, K., **Drewnowski, J.**, Zaperó, D. (2009). NITROGEN TRANSFORMATIONS AND MASS BALANCES IN ANAEROBIC/ANOXIC/AEROBIC BATCH EXPERIMENTS WITH FULL-SCALE BIOMASSES FROM BNR ACTIVATED SLUDGE SYSTEMS. Water Science and Technology, 60 (9), 2463-2470 (8).
20. Mąkinia J., Czerwionka K., **Drewnowski J.**, Swinarski M., Chrzanowska M., Fordoński W. (2008). PORÓWNANIE TRADYCYJNYCH I ALTERNATYWNYCH ŹRÓDEŁ WĘGLA ZEWNĘTRZNEGO DLA POLRAWY EFEKTYWNOŚCI PROCESU DENITRYFIKACJI, wyd. miesięcznika „FORUM EKSPLOATATORA”, Nr 2, 15-20 s. 6. (in Polish)
21. Marjanowski J., **Drewnowski, J.** (2006). NOWOCZESNE TECHNOLOGIE UZDATNIANIA WODY DLA WODOCIĄGÓW, PRZEMYSŁU SPOŻYWCZEGO I CIEPŁOWNICTWA, wyd. miesięcznika „INSTAL”, Nr 11/06, s. 6. (in Polish)
22. Marjanowski J., Kukielka A., **Drewnowski, J.** (2006). DEKARBONIZACJA JAKO METODA UZDATNIANIA WODY DO PRODUKCJI PIWA, wyd. kwartalnika BMP „AGRO PRZEMYSŁ”, Nr 3/06, s. 23. (in Polish)
23. Łasińska E., Marjanowski J., **Drewnowski J.** (2006). NASZE STACJE UZDATNIANIA WODY UZYSKUJĄ TYTUŁ „INWESTYCJI-MODERNIZACJI ROKU” wyd. kwartalnika BMP „OCHRONA ŚRODOWISKA”, Nr 3/06, s. 50. (in Polish)

B. Chapters in Books

1. **Drewnowski J.**, Zmarzły M. (2017). Mathematical Modelling in Diagnosis of Wastewater Treatment Plant, Monograph by many authors *Frontiers in Wastewater Treatment and Modelling*, Mannina G. (Eds), Springer, Switzerland, page: 727-737, ISBN 978-3-319-58420-1 (**Monograph in English - International range**)
2. **Drewnowski, J.** (2015). Modelowanie matematyczne hydrolizy substratu wolnorozkładalnego na przykładzie badań kinetyki procesów biochemicznych osadu czynnego z oczyszczalni ścieków w Gdańsku. *Interdyscyplinarne zagadnienia w inżynierii i ochronie środowiska. Tom 5.: Praca zbiorowa pod red. Jacka Wiśniewskiego, Małgorzaty Kutylowskiej i Agnieszki Trusz-Zdybek. Oficyna Wydawnicza Politechniki Wrocławskiej, Biblioteka Dolnośląska. ISBN 978-83-7493-890-7, Wrocław 2015., 63-79, s. 17*
3. **Drewnowski J.** (2015). THE HYDROLYSIS OF SLOWLY BIODEGRADABLE SUBSTRATE IN ACTIVATED SLUDGE. ISBN 978-3-659-62895-5, Eds. LAP Germany, p.1-126, (**Monograph in English - International range**)
4. **Drewnowski, J.** , Mąkinia, J. (2012). THE ROLE OF SLOWLY BIODEGRADABLE SUBSTRATE IN A FULL-SCALE BIOLOGICAL NUTRIENT REMOVAL (BNR) ACTIVATED SLUDGE SYSTEMS. *Societas Humboldtiana Polonorum: The World Without Borders - Science Without Borders. Eds. B. Buszewski, M. Jaskuła, Kraków-Toruń, 2012, 307-318, s. 10. (Monograph in English - International range)*
5. Czerwionka K., Mąkinia J., **Drewnowski J.** (2009). PRZEMIANY AZOTU ORGANICZNEGO W KOMORACH OSADU CZYNNEGO Z BIOLOGICZNYM USUWANIEM ZWIĄZKÓW BIOGENNYCH. *Monografie Komitetu Inżynierii Środowiska PAN vol. 56, Gdańsk, 2009, 84 – 93 s. 10. (in Polish)*

C. Project Reports

1. Mąkinia J., Swinarski M., Zima P., Czerwionka K., **Drewnowski J.**, Chrzanowska M., Fordoński W. (2010). WSPOMAGANA KOMPUTEROWO OPTYMALIZACJA PROCESU USUWANIA AZOTU W MIEJSKICH OCZYSZCZALNIACH ŚCIEKÓW NA PRZYKŁADZIE OCZYSZCZALNI „GDAŃSK-WSCHÓD”. *Sprawozdanie wykonane w ramach projektu badawczego MNiSW (N523 069 32/2871). Politechnika Gdańska 2010, Gdańsk, 1-120 s. (in Polish)*
2. Mąkinia J., Czerwionka K., Jankowska K., **Drewnowski J.**, Kulbat E., Łuczkiwicz A., Swinarski M., Kaszubowska M., Kowal P., Majtacz J. (2013) *Raport końcowy z badań wykonanych w ramach projektu badawczego współfinansowanego ze środków Europejskiego Funduszu Rozwoju Regionalnego w ramach Programu Operacyjnego Innowacyjna Gospodarka nr UDA-POIG.01.03.01-22-140/09-01 „Innowacyjne źródło węgla dla wspomagania denitryfikacji w komunalnych oczyszczalniach ścieków” Politechnika Gdańska 2010, Gdańsk 1-151 s. (in Polish)*

D. Conference Platform Presentations

1. **Drewnowski, J.** (2008). THE EFFECT OF SLOWLY BIODEGRADABLE SUBSTRATE ON THE OXYGEN UPTAKE RATE IN ACTIVATED SLUDGE SYSTEMS. VII-th International Youth Scientific and Environmental Safety Forum of the Baltic Sea Region Countries "ECOBALTICA'08", 26-28 June 2008 r., St. Petersburg (Rosja), 69-76 (8).
2. Mąkinia., J., **Drewnowski, J.**, Bieniowski, M. (2008). WPŁYW SKŁADU CHEMICZNEGO NA KINETYKĘ PROCESU USUWANIA AZOTU W KOMORACH OSADU CZYNNEGO. MOŻLIWOŚCI POPRAWY STOSUNKU C/N W DOPLYWAJĄCYCH ŚCIEKACH. Materiały II seminarium naukowo-technicznego „Optymalizacja usuwania azotu – doświadczenia krajowe i zagraniczne”, 5-6 listopada 2008 , Warszawa, 31 ss. (in Polish)
3. **Drewnowski, J.** , Mąkinia., J. (2009). UTILIZATION OF INTERNAL CARBON SOURCES BY A FULL-SCALE PROCESS BIOMASS FOR DENITRIFICATION AND EBPR. The IWA 1st East European Regional Young Water Professionals Conference 21 - 22 May, 2009, Minsk, Belorussia, 185-191 (7).
4. **Drewnowski, J.** , Mąkinia., J. (2009). WPŁYW SUBSTRATU WOLNO-ROZKŁADALNEGO NA KINETYKĘ PROCESÓW BIOCHEMICZNYCH W KOMORACH OSADU CZYNNEGO. Materiały seminarium naukowego projektu w ramach Norweskiego Mechanizmu Finansowego pt. „Nowe metody redukcji emisji zanieczyszczeń i wykorzystania produktów ubocznych oczyszczalni ścieków”, Politechnika Gdańska, 17 czerwca 2009 r., 19 ss., Gdańsk. (in Polish)
5. **Drewnowski, J.** (2010). WPŁYW ZWIĄZKÓW ORGANICZNYCH ZAWIESINOWYCH I KOLOIDALNYCH NA SZYBKOŚĆ DENITRYFIKACJI NA PRZYKŁADZIE OCZYSZCZALNI „WSCHÓD” W GDAŃSKU I „DĘBOGÓRZE” W GDYNI. Materiały seminarium naukowego w ramach Programu Operacyjnego „Innowacyjna Gospodarka” pt. „Innowacyjne źródło węgla dla wspomagania denitryfikacji w komunalnych oczyszczalniach ścieków”, Politechnika Gdańska, 12 Maja, 2010, Gdańsk. (in Polish)
6. **Drewnowski, J.** , Mąkinia., J. (2010). THE EFFECT OF SLOWLY BIODEGRADABLE ORGANIC COMPOUNDS IN A FULL-SCALE BIOLOGICAL NUTRIENT REMOVAL (BNR) ACTIVATED SLUDGE SYSTEMS. The IWA Specialist Conference "Water and Wastewater Treatment Plants in Towns and Communities of the XXI Century: Technologies, Design and Operation" 2-4 June, 2010, Moscow, Russia, IEC "Crocus Expo" [CD-ROM].
7. **Drewnowski, J.** , Mąkinia., J. (2010). THE EFFECT OF COLLOIDAL AND PARTICULATE ORGANIC COMPOUNDS ON DENITRIFICATION AND EBPR IN A FULL-SCALE ACTIVATED SLUDGE SYSTEMS. The IWA 5th IWA International Young Water Professionals Conference 5 -7 July, 2010, Sydney, Australia [CD-ROM].
8. Makinia J., Czerwionka K., Swinarski M., **Drewnowski J.**, Majtacz J., Kaszubowska (2011) THE IMPACT OF PRECIPITATION & EXTERNAL C SOURCE ADDITION ON BIOLOGICAL NUTRIENT REMOVAL IN ACTIVATED SLUDGE SYSTEMS –

- EXPERIMENTAL INVESTIGATION & MATHEMATICAL MODELING M. The 11th IWA Specialised Conference "Design, Operation and Economics of Large Waste Water Treatment Plants" conference papers, Budapest, Hungary, 4-8 September 2011– IWA [CD-ROM].
9. **Drewnowski J.**, (2011). "ROLA WEWNĘTRZNYCH ŹRÓDEŁ WĘGLA ORGANICZNEGO W USUWANIU ZWIĄZKÓW BIOGENNYCH METODĄ OSADU CZYNNEGO" Seminarium doktoranckie "Identyfikacja naukowych aspektów zagadnień inżynierskich" Politechnika Gdańska Wydział Inżynierii Lądowej i Środowiska. 20 maj 2011. - S. 79. - Gdańsk, Poland. (in Polish)
 10. **Drewnowski, J.** , Mąkinia., J. (2012). MODELING HYDROLYSIS OF SLOWLY BIODEGRADABLE ORGANIC COMPOUNDS IN BIOLOGICAL NUTRIENT REMOVAL ACTIVATED SLUDGE SYSTEMS. The 6th IWA International Young Water Professionals Conference, 10-13 July 2012, Budapest, Hungary.
 11. **Drewnowski, J.** (2013). THE IMPACT OF SLOWLY BIODEGRADABLE ORGANIC COMPOUNDS ON THE OXIGEN UPTAKE RATE IN ACTIVATED SLUDGE SYSTEMS The IWA 5th East European Young and Senior Water Professionals Conference 27 -29 June, 2013, Kiev, Ukraina.
 12. **Drewnowski, J.** (2015). Evaluation and behaviour of slowly biodegradable substrate on mathematical modelling of oxygen uptake rate in activated sludge systems. The IWA 1st Balkan Young Water Professionals Conference 10-12 May 2015 Thessaloniki, Greece [CDROM].
 13. **Drewnowski J.**, Remiszewska-Skwarek., A. (2015). The simulation of activated sludge system for optimization of predictive aeration at large WWTP The IWA 7th East European Young and Senior Water Professionals Conference 17 -19 September, 2015, Belgrad, Serbia [CD-ROM].
 14. Guz Ł., **Drewnowski J.**, Łagód G., Piotrowicz A., Suchorab Z., Jaromin-Gleń K. (2016). USING ON-LINE MEASUREMENT BY ELECTRONIC NOSE AND COMPUTER SIMULATIONS FOR REAL-TIME CONTROL AT WWTP. The IWA 8th East European Young and Senior Water Professionals Conference 11 -14 May, 2016, Gdańsk, Polska [CD-ROM].
 15. Szaja A., **Drewnowski J.**, Łagód G., Aguilar J. (2016) THE COD FRACTIONATION OF MUNICIPAL WASTEWATER BY RESPIROMETRIC METHOD IN CONTROL AND MODELING ACTIVATED SLUDGE SYSTEMS The IWA 8th East European Young and Senior Water Professionals Conference 11 -14 May, 2016, Gdańsk, Polska [CD-ROM].
 16. **Drewnowski J.**, Zaborowska E., Hernandez De Vega C. (2016). COMPUTER SIMULATION IN PREDICTING BIOCHEMICAL PROCESSES AND ENERGY BALANCE AT WWTPS. The IWA 8th East European Young and Senior Water Professionals Conference 11 -14 May, 2016, Gdańsk, Polska [CD-ROM].

17. Rubio J., Romero L., Garcia Morales J., **Drewnowski J.**, Fernandez-Morales F. J. THE ROLE OF BIODEGRADABLE PARTICULATE ORGANIC SUBSTRATES IN ANAEROBIC DIGESTION SYSTEMS. The IWA 8th East European Young and Senior Water Professionals Conference 11 -14 May, 2016, Gdańsk, Polska [CD-ROM].
18. **Drewnowski J.**, Zmarzły M. (2017) Mathematical Modelling in Diagnosis of Wastewater Treatment Plant, IWA Specialised Conference “Frontiers in Wastewater Treatment and Modelling”, 21-24 May 2017, Palermo, Italy
19. **Drewnowski J.**, Zmarzły M. (2017) “THE USE OF MATHEMATICAL MODELS FOR DIAGNOSIS OF ACTIVATED SLUDGE SYSTEMS IN WWTP” International conference on advances in energy systems and environmental engineering (ASEE17), 2-5 July 2017, Wrocław, POLAND
20. **Drewnowski J.** (2017) “REVIEW ON COMPETITION AOB AND NOB AS AN IMPORTANT ELEMENT FOR COST EFFECTIVE METHODS OF REMOVING NITROGEN FROM WASTEWATER” 20th International Youth Scientific and Environmental Safety Forum of the Baltic Sea Region Countries “ECOBALTICA”, 24-27 August 2017 r., Grodno (Białorus), CD-ROM.
21. **Drewnowski J.**, Zaborowska E., Pérez Figueroa S., Robles A., Seco A. (2017) “Modeling Aeration Control Strategies for Low Energy Process Control in WWTP” The 1st IWA Polish Young Water Professionals Conference, 11-13 September 2017, Cracow, POLAND

E. Conference Posters

1. **Drewnowski, J.** (2008). THE EFFECT OF SLOWLY BIODEGRADABLE SUBSTRATE ON THE OXIGEN UPTAKE RATE IN ACTIVATED SLUDGE SYSTEMS. VII-th International Youth Scientific and Environmental Safety Forum of the Baltic Sea Region Countries “ECOBALTICA’08”, 26-28 June 2008., St. Petersburg (Rosja).
2. **Drewnowski J.**, Swinarski, M., Mąkinia, J., Czerwionka, K. (2009). UTILIZATION OF DIFFERENT CARBON SOURCES BY A FULL-SCALE PROCESS BIOMASS FOR DENITRIFICATION AND EBPR. The 5th IWA Specialty Conference “Activated Sludge Population Dynamics (ASPD5)”, 24 -27 May, 2009, Aalborg, Denmark, 1-2 s.
3. Mąkinia J., Czerwionka K., **Drewnowski J.** (2009). BIODEGRADABLE ORGANIC NITROGEN IN TREATMENT PLANTS. WEF Nutrient Removal Conference 2009, 28 June – 1 July 2009, Washington (USA).
4. **Drewnowski J.**, Mąkinia J., Czerwionka K. (2009). THE ROLE OF PARTICULATE AND COLLOIDAL SUBSTRATE IN BIOLOGICAL NUTRIENT REMOVAL ACTIVATED SLUDGE SYSTEMS. IWA 2nd Specialized Conference “Nutrient Removal in Wastewater Treatment Processes”, 6 – 9 September 2009, Krakow, 1117-1119 s.

5. **Drewnowski, J.**, Mąkinia, J. (2010). WPLYW SUBSTRATU WOLNOROZKŁADALNEGO NA KINETYKĘ PROCESÓW BIOCHEMICZNYCH W SYSTEMACH OSADU CZYNNEGO Z BIOLOGICZNYM USUWANIEM ZWIĄZKÓW BIOGENNYCH. Seminarium Politechnika Gdańska – uniwersytet przedsiębiorczy XXI wieku, 24-26 Maja, 2010, Gdańsk.
6. **Drewnowski, J.**, Mąkinia, J. (2010). THE ROLE OF SLOWLY BIODEGRADABLE SUBSTRATE IN A FULL-SCALE BIOLOGICAL NUTRIENT REMOVAL (BNR) ACTIVATED SLUDGE SYSTEMS. 8 Międzynarodowy Kongres Naukowy Societas Humboldtiana Polonorum 27-30 June, 2010, Toruń, 83-85 s.
7. Łuczkiwicz, A., Jankowska, K., Mąkinia, J., Czerwionka, K., **Drewnowski, J.** (2010) THE USE OF MICROBIOLOGICAL TECHNIQUES AND KINETIC MEASUREMENTS FOR INVESTIGATION OF NITRIFICATION IN FULL-SCALE ACTIVATED SLUDGE SYSTEMS IN NORTHERN POLAND. The IWA Water Research Conference 11-14 April, 2010, Lisbon, Portugal.
8. Makinia J., Czerwionka K., **Drewnowski J.**, Majtacz J., Kaszubowska M. (2012). The occurrence and behaviour of nitrite (NO₂) in full-scale biological nutrient removal wastewater treatment plants World Water Congress & Exhibition 16–21 September 2012 Busan, Korea.
9. **Drewnowski, J.**, Marcinkiewicz, M. (2014). Estimation and modeling hydrolysis of slowly biodegradable substrate based on the batch respirometric tests in activated sludge systems The IWA Conference "Activated Sludge – 100 years and counting" 12-14 June, 2014, Essen, Germany, [CD-ROM].
10. **Drewnowski, J.** (2014). COMPARISON OF THE CONVENTIONAL AND ALTERNATIVE GRANULAR MATERIALS FOR DUAL-MEDIA FILTRATION OF GROUNDWATER: PILOT PLANT TESTING. The 2nd International Scientific and Technical Conference. PURE WATER. FUNDAMENTAL, APPLIED AND INDUSTRIAL ASPECTS. 8-11 October, 2014, Kiev, Ukraine, 11-14
11. **Drewnowski J.**, Makinia J.(2015). Modeling the Effects of Slowly Biodegradable Substrate at Large WWTP in Northern Poland. The 12th IWA Specialised Conference " Large Waste Water Treatment Plants" conference papers, Praga, Czechy, 6-9 September 2015– IWA [CD-ROM]
12. Jaromin-Gleń K, Piotrowicz A, **Drewnowski J**, Ładóg G. (2015) The experimental evaluation and modeling of SBR removing nutrients under different aeration conditions Conference Precedings The IWA Specialist Conference on Nutrient Removal and Recovery: moving innovation into practice. Gdańsk, 18-21 May 2015 [CD-ROM].
13. **Drewnowski, J.**, Makinia, J. (2015). The application of mathematical modelling and computer simulation in activated sludge systems. I Międzynarodowa Konferencja Naukowo-Techniczna" 4-6 Listopada, 2015, Lwów, Ukraina

14. Guz Ł., **Drewnowski J.**, Łagód G., Piotrowicz A., Suchorab Z., Jaromin-Gleń K. (2016). USING ON-LINE MEASUREMENT BY ELECTRONIC NOSE AND COMPUTER SIMULATIONS FOR REAL-TIME CONTROL AT WWTP. The IWA 8th East European Young and Senior Water Professionals Conference 11 -14 May, 2016, Gdańsk, Polska [CD-ROM].
15. **Drewnowski J.**, Remiszewska-Skwarek., A. (2017). THE ADVANCED MONITORING AS A KEY FACTOR FOR APPROPRIATE OPTIMIZATION AND CONTROL OF FULL-SCALE ACTIVATED SLUDGE SYSTEMS – CASE STUDY DEBOGORZE WWTP. The IWA 9th East European Young and Senior Water Professionals Conference 24 -27 May, 2017, Budapest, Hungary [CD-ROM].
16. Pliashchynk V., Danko Y., Łagód G., **Drewnowski J.**, Babko R. (2017). “Ciliated protozoa in the impact zone of the Uzhgorod treatment plant” The 1st IWA Polish Young Water Professionals Conference, 11-13 September 2017, Cracow, POLAND
17. Pliashchynk V., Danko Y., Łagód G., **Drewnowski J.**, Babko R. (2017). “Ciliated protozoa in the impact zone of the Uzhgorod treatment plant” The 1st IWA Polish Young Water Professionals Conference, 11-13 September 2017, Cracow, POLAND
18. Kopeć Ł., **Drewnowski J.**, Fernandez-Morales F. J. (2017) „Effect of organic nitrogen concentration on the efficiency of trickling filters” The 1st IWA Polish Young Water Professionals Conference, 11-13 September 2017, Cracow, POLAND

F. Conference Full Papers

1. **Drewnowski, J.** (2008). THE EFFECT OF SLOWLY BIODEGRADABLE SUBSTRATE ON THE OXIGEN UPTAKE RATE IN ACTIVATED SLUDGE SYSTEMS. VII-th International Youth Scientific and Environmental Safety Forum of the Baltic Sea Region Countries “ECOBALTICA’08”, 26-28 June 2008 r., St. Petersburg (Rosja), 69-76 (8).
2. Swinarski, M., Mąkinia, J., Czerwionka, K., Chrzanowska, M. i **Drewnowski, J.** (2008). COMPERISON OF THE EFFECTS OF CONVENTIONAL AND ALTERNATIVE EXTERNAL CARBON SOURCES FOR ENHANCING OF THE DENITRIFICATION PROCESS. The 81st Annual WEF Technical Exhibition and Conference WEFTEC’08, 18–22 October 2008, Chicago (USA) [CD-ROM]
3. **Drewnowski, J.** , Mąkinia., J. (2009). UTILIZATION OF INTERNAL CARBON SOURCES BY A FULL-SCALE PROCESS BIOMASS FOR DENITRIFICATION AND EBPR. The IWA 1st East European Regional Young Water Professionals Conference 21-22 May, 2009, Minsk, Belorussia, 185-191 s. 7.
4. Czerwionka, K., Mąkinia, J., Pagilla, K.R., **Drewnowski, J.** (2009). TRANSFORMATIONS OF DISSOLVED AND COLLOIDAL ORGANIC NITROGEN IN BIOLOGICAL NUTRIENT REMOVAL ACTIVATED SLUDGE SYSTEMS. WEF Nutrient Removal Conference, 28 June – 1 July 2009, Washington (USA), [CD-ROM].

5. Mąkinia, J., **Drewnowski, J.**, Swinarski, M., Czerwionka, K. (2009). INTERNAL VS. EXTERNAL (ALTERNATIVE) CARBON SOURCES FOR DENITRIFICATION AND EBPR ACCOMPLISHED BY A FULL-SCALE PROCESS BIOMASS. WEF Nutrient Removal Conference 2009, 28 June – 1 July 2009, Washington (USA), [CD-ROM].
6. Swinarski M., Mąkinia J., Fordoński W., **Drewnowski J.**, Chrzanowska M., Czerwionka K., Fernandez F.J. (2009). THE POTENTIAL OF ENHANCING DENITRIFICATION IN THE ACTIVATED SLUDGE PROCESS WITH BY-PRODUCTS FROM THE ALCOHOL PRODUCTION. The IWA 2nd Specialized Conference “Nutrient Removal in Wastewater Treatment Processes”, 6 – 9 September 2009, Krakow, 451-458 s. 8.
7. Mąkinia, J., Stensel, H.D., Czerwionka, K., **Drewnowski, J.**, Zapero, D. (2009). NITROGEN TRANSFORMATIONS AND MASS BALANCES IN ANAEROBIC/ANOXIC/AEROBIC BATCH EXPERIMENTS WITH FULL-SCALE BIOMASSES FROM BNR ACTIVATED SLUDGE SYSTEMS. The IWA 2nd Specialized Conference “Nutrient Removal in Wastewater Treatment Processes”, 6–9 September 2009, Krakow, 211-219 s. 9.
8. **Drewnowski, J.**, Mąkinia., J. (2010). THE EFFECT OF SLOWLY BIODEGRADABLE ORGANIC COMPOUNDS IN A FULL-SCALE BIOLOGICAL NUTRIENT REMOVAL (BNR) ACTIVATED SLUDGE SYSTEMS. The IWA Specialist Conference”Water and Wastewater Treatment Plants in Towns and Communities of the XXI Century: Technologies, Design and Operation” 2-4 June, 2010, Moscow, Russia, IEC “Crocus Expo” [CD-ROM].
9. **Drewnowski, J.**, Mąkinia., J. (2010). THE EFFECT OF COLLOIDAL AND PARTICULATE ORGANIC COMPOUNDS ON DENITRIFICATION AND EBPR IN A FULL-SCALE ACTIVATED SLUDGE SYSTEMS. The IWA 5th International Young Water Professionals Conference 5-7 July, 2010, Sydney, Australia [CD-ROM].
10. **Drewnowski, J.**, Mąkinia., J. (2010). THE ROLE OF COLLOIDAL AND PARTICULATE ORGANIC COMPOUNDS IN DENITRIFICATION AND EBPR OCCURRING IN A FULL-SCALE ACTIVATED SLUDGE SYSTEMS. The IWA World Water Congress and Exhibition 19-24 September, 2010, Montreal, Canada [CD-ROM].
11. Mąkinia J., Czerwionka K., Swinarski M., **Drewnowski J.**, Majtacz J., Kaszubowska (2011) THE IMPACT OF PRECIPITATION & EXTERNAL C SOURCE ADDITION ON BIOLOGICAL NUTRIENT REMOVAL IN ACTIVATED SLUDGE SYSTEMS – EXPERIMENTAL INVESTIGATION & MATHEMATICAL MODELING M. The 11th IWA Specialised Conference "Design, Operation and Economics of Large Waste Water Treatment Plants" conference papers, Budapeszt, Hungary, 4-8 September 2011– IWA [CD-ROM].
12. Swinarski M., Stensel H.D., Mąkinia J., Czerwionka K., **Drewnowski J.** (2011) MODELING EXTERNAL CARBON ADDITION IN COMBINED N-P ACTIVATED SLUDGE SYSTEMS WITH AN EXTANTION OF THE IWA ACTIVATED SLUDGE

MODELS. Nutrient Recovery and Management 2011 Conference proceedings, 9-12 January 2011, Miami, (USA), [CD-ROM].

13. **Drewnowski, J.** , Mąkinia., J. (2012). MODELING HYDROLYSIS OF SLOWLY BIODEGRADABLE ORGANIC COMPOUNDS IN BIOLOGICAL NUTRIENT REMOVAL ACTIVATED SLUDGE SYSTEMS. The 6th IWA International Young Water Professionals Conference, 10-13 July 2012, Budapeszt, Hungary.
14. **Drewnowski, J.** (2013). THE IMPACT OF SLOWLY BIODEGRADABLE ORGANIC COMPOUNDS ON THE OXIGEN UPTAKE RATE IN ACTIVATED SLUDGE SYSTEMS The IWA 5th East European Young and Senior Water Professionals Conference 27 -29 June, 2013, Kiev, Ukraina.
15. **Drewnowski J.**, Makinia J. (2015). Modeling the Effects of Slowly Biodegradable Substrate at Large WWTP in Northern Poland. The 12th IWA Specialised Conference " Large Waste Water Treatment Plants" conference papers, Praga, Czechy, 6-9 September 2015– IWA [CD-ROM]
16. Jaromin-Gleń K, Piotrowicz A, **Drewnowski J**, Ładóg G. (2015) The experimental evaluation and modeling of SBR removing nutrients under different aeration conditions Conference Precidings The IWA Specialist Conference on Nutrient Removal and Recovery: moving innovation into practice. Gdańsk, 18-21 May 2015 [CD-ROM].
17. Guz Ł., **Drewnowski J.**, Łagód G., Piotrowicz A., Suchorab Z., Jaromin-Gleń K. (2016). USING ON-LINE MEASUREMENT BY ELECTRONIC NOSE AND COMPUTER SIMULATIONS FOR REAL-TIME CONTROL AT WWTP. The IWA 8th East European Young and Senior Water Professionals Conference 11 -14 May, 2016, Gdańsk, Polska [CD-ROM].

VIII. Certification

I, the undersigned certify that, to the best of my knowledge and belief, this Curriculum Vitae correctly describes myself, my qualifications and experience.