

CURRICULUM VITAE



NIBIO
NORSK INSTITUTT FOR
BIOØKONOMI

PERSONAL INFORMASJON

Fullt navn **Adam Mariusz PARUCH**
Kjønn Male
Nasjonalitet Norsk
Vitenskapelige graden PhD / Doktor ingeniør
Nåværende stilling Seniorforsker 1183 med professorkompetanse
Arbeidssted Avdeling for hydrologi og vannmiljø, Divisjon for miljø og naturressurser, NIBIO - Norsk institutt for bioøkonomi, Pb 115, NO-1431 Ås

KONTAKTINFORMASJON

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NØKKELKVALIFIKASJONER

- Miljø/utvikling/naturvern/teknikk
- Vannkvalitet (overflatevann, dreneringsvann, grunnvann, og avrenningsvann)
- Mikrobiologi i avløpsvann (hvitvann, gråvann, svartvann, bruntvann og gultvann), rensfilter og kompost
- Fekal vannforurensning (antropogenisk og animalsk opprinnelse) og fekale indikatorbakterier
- Mikrobiell kildeoppsporing av fekal vannforurensning (*E. coli*, *Bacteroidales* DNA markører, RT-qPCR)
- Mikrobiologi / molekylærbiologi / DNA tester / vertsspesifikke genetiske markører
- Analyser av patogene organismer (gram-negative/positive bakterier, virus og parasittiske protozoer)
- Naturbaserte rensmetoder (vann, avløp og avfall)
- Kretsløpsteknologi for avfall og avløp
- Kvalitet av vann og jord etter avløpsvanning
- Kompostering av organisk avfall og fekalier fra tørstoiletter

FAGLIG KOMPETANSE OG ERFARINGER

- Prosjektleder med erfaring innenfor idéutvikling, planlegging, implementering, gjennomføring og rapportering av FoU-prosjekter
- Prosjektleder av norske partnere i EØS-prosjekter
- Forskning og oppdragsprosjekter innen kretsløpsteknologi og naturbaserte rensesystemer
- Ansvarlig for laboratorieforsk og mikrobiologiske analyser av fekale indikatorbakterier i vann, avløpsvann, avrenning og avfall
- Ansvarlig for gjennomføring av grunnundersøkelser i forbindelse med gjenbruk av materialer fra minirensanleggene (biologiske filtre, våtmarksfiltere og filterbeds), med hovedfokus på hygieniske aspekter
- Fagansvarlig for konsept- og prosjektutvikling, planleggings- og koordineringsaktiviteter, partnersøk, nettverksbygging og søknadsskriving



UTDANNELSE

Dato (fra – til)	1996 - 2000	PhD / Dr. Ing., doktorgrad innen miljøutvikling. Landbruksuniversitetet i Wroclaw, Polen
	1995 - 1996	MSc, magistergrad innen miljøvern. Landbruksuniversitetet i Wroclaw, Polen
	1991 - 1995	BSc / Ing., ingeniørgrad innen miljøteknikk. Landbruksuniversitetet i Wroclaw, Polen

TIDLIGERE STILLINGER

Dato (fra – til)	2015 -	Seniorforsker 1183 med professorkompetanse, NIBIO, Ås, Norge
	2010 - 2015	Seniorforsker 1183 med professorkompetanse, Bioforsk, Ås, Norge
	2006 - 2010	Forsker, Bioforsk Jord og miljø, Ås, Norge
	2005 - 2006	Forsker, Jordforsk – Senter for jordfaglig miljøforskning, Ås, Norge
	2003 - 2005	Gjesteforsker, NLH (Norges Landbruksuniversitetet) og UMB (Universitetet for miljø- og biovitenskap), Ås, Norge
	2002 - 2003	PostDoc, NLH, Ås, Norge
	2001 - 2006	Professorassistent, Landbruksuniversitetet i Wroclaw, Polen
	1996 - 2000	Doktorgradsstudent, Landbruksuniversitetet i Wroclaw, Polen
	1996 - 1996	Lektorassistent, Landbruksuniversitetet i Wroclaw, Polen

PERSONLIGE FERDIGHETER OG KOMPETANSE

Språk	- Polsk, engelsk og norsk. Noe slovakisk, tsjekkisk og russisk
IT	- Programmer: MS Office, Corel, Statistica - Operativsystem (OS): Windows
Undervisning og kunnskapsformidling	- Faglige kurs for master og bachelor studenter ved Landbruksuniversitetet i Wroclaw (Polen) og Universitetet for miljø- og biovitenskap i Ås (Norge) - Veileder for bachelor og master studenter - Ekstern sensor for BSc- og MSc-oppgaver - Foredragsholder nasjonalt og internasjonalt
Redaksjonskomité	- Journal of Ecological Engineering - Annals of the Academy of Romanian Scientists - Series on Chemistry

TILLEGGSI NFORMASJON

Medlemskap	- The International Commission on Water Quality (ICWQ) - The Norwegian Society of Graduate Technical and Scientific Professionals (Tekna) - The Norwegian Water Association
Diplomer og priser	- <i>Sapere auso</i> - Distinction from the Rector of Wroclaw University of Environmental and Life Sciences - Three Diplomas of the Rector of Agricultural University of Wroclaw and Wroclaw University of Environmental and Life Sciences for series of scientific publications - Prize of the Rector of Agricultural University of Wroclaw for the Doctoral Thesis - Prize of the Dean of the Faculty of Environmental Engineering and Geodesy, Agricultural University of Wroclaw, for The Best MSc

VITENSKAPELIGE PUBLIKASJONER

- 56 fagfellevurderte publikasjoner
- 2 bøker
- 1 monografier

LISTE OVER FAGFELLEVRURDETE ARTIKLER:

1. Paruch L., Paruch A.M., Eiken H.G., Skogen M., Sørheim R. 2020. Seasonal dynamics of lotic bacterial communities assessed by 16S rRNA gene amplicon deep sequencing. *Scientific Reports*, 10, 16399. <https://doi.org/10.1038/s41598-020-73293-9>
2. Gavrilă A.-M., Zaharia A., Paruch L., Perrin F.X., Sarbu A., Olaru A.G., Paruch A.M., Iordache T.-V. 2020. Molecularly imprinted films and quaternary ammonium-functionalized microparticles working in tandem against pathogenic bacteria in wastewaters. *Journal of Hazardous Materials*, 399, 123026. <https://doi.org/10.1016/j.jhazmat.2020.123026>
3. Vingerhagen R., Paruch A.M., Paruch L., Kvisle V. 2020. Fekalkildesporing i Nitelva, Lillestrøm kommune. Skyldes det mennesker? (Faecal source tracking in Nitelva. Does it originate from humans?). *Vann*, 55(2), 163-170. <http://vannforeningen.no/wp-content/uploads/2020/06/Vingerhagen.pdf>
4. Paruch L., Paruch A.M., Sørheim R. 2020. DNA-based faecal source tracking of contaminated drinking water causing a large *Campylobacter* outbreak in Norway 2019. *International Journal of Hygiene and Environmental Health*, 224, 113420. <https://doi.org/10.1016/j.ijheh.2019.113420>
5. Paruch L., Paruch A.M., Eiken H.G., Sørheim R. 2019. Faecal pollution affects abundance and diversity of aquatic microbial community in anthropo-zoogenically influenced lotic ecosystems. *Scientific Reports*, 9, 19469. <https://doi.org/10.1038/s41598-019-56058-x>
6. Paruch L., Paruch A.M., Eiken H.G., Sørheim R. 2019. Aquatic microbial diversity associated with faecal pollution of Norwegian waterbodies characterized by 16S rRNA gene amplicon deep sequencing. *Microbial Biotechnology*, 12(6), 1487-1491. <https://doi.org/10.1111/1751-7915.13461>
7. Paruch A.M., Mæhlum T., Eltun R., Tapu E., Spinu O. 2019. Green wastewater treatment technology for agritourism business in Romania. *Ecological Engineering*, 138, 133-137. <https://doi.org/10.1016/j.ecoleng.2019.07.005>
8. Orzepowski W., Paruch A.M., Kowalczyk T., Pokładek R., Pulikowski K. 2019. Assessing the applicability of groundwater monitoring data in the modelling of soil water retention characteristics. *Water and Environment Journal*, 33(2), 192-202. <https://doi.org/10.1111/wej.12390>
9. Paruch L., Paruch A.M. 2018. *Contributors to faecal water contamination in urban environments*. Zelenakova M. (eds) Water Management and the Environment: Case Studies. WINEC 2017. Water Science and Technology Library, vol 86. Springer, Cham, pp 215-230. https://doi.org/10.1007/978-3-319-79014-5_10
10. Paruch A.M., Pulikowski K., Bawiec A., Paweska K. 2017. Assessment of groundwater quality in areas irrigated with food industry wastewater: a case of wastewater utilisation from sugar and yeast factories. *Environmental Processes*, 4(4), 799-812. <https://doi.org/10.1007/s40710-017-0274-3>
11. Paruch L., Paruch A.M. 2017. The importance of melting curve analysis in discriminating faecal and environmental *Bacteroidales* bacteria. *Microbiology*, 86(4), 536-538. <https://doi.org/10.1134/S0026261717040117>
12. Paruch L., Paruch A.M., Blankenberg A.-G.B., Haarstad K., Mæhlum T. 2017. Norwegian study on microbial source tracking for water quality control and pollution removal in constructed wetland treating catchment run-off. *Water Science and Technology*, 76(5), 1158-1166. <https://doi.org/10.2166/wst.2017.303>
13. Orzepowski W., Paruch A.M., Kowalczyk T., Pokładek R., Pulikowski K. 2017. Modelling of water reserves in mineral soils with different retention properties. *Water and Environment Journal*, 31(3), 388-400. <https://doi.org/10.1111/wej.12255>
14. Krystad R., Paruch A.M., Paruch L., Mæhlum T. 2017. Gjenåpning av byvassdrag: forekomst, kilder og rensing av *E. coli* i Teglverksdammen i Hovinbekken, Oslo (Deculverting of urban watercourses: occurrence, sources and removal of *E. coli* in Teglverksdammen in Hovinbekken, Oslo). *Vann*, 52(4), 373-386. <https://vannforeningen.no/wp-content/uploads/2018/04/Krystad.pdf>
15. Paruch A.M., Mæhlum T., Haarstad K., Blankenberg A.-G.B., Hensel G. 2016. *Performance of constructed wetlands treating domestic wastewater in Norway over a quarter of a century – Options for nutrient removal and recycling*. In: Vymazal J. (ed) Natural and Constructed Wetlands. Springer International Publishing Switzerland, pp. 41-55. https://doi.org/10.1007/978-3-319-38927-1_3
16. Blankenberg A.-G.B., Paruch A.M., Paruch L., Deelstra J., Haarstad K. 2016. *Nutrients tracking and removal in constructed wetlands treating catchment runoff in Norway*. In: Vymazal J. (ed) Natural and Constructed Wetlands. Springer International Publishing Switzerland, pp. 23-40. https://doi.org/10.1007/978-3-319-38927-1_2
17. Haarstad K., Hensel G., Paruch A.M., Blankenberg A.-G.B. 2016. *Phosphorus recycling from waste, dams and wetlands receiving landfill leachate – Long term monitoring in Norway*. In: Vymazal J. (ed) Natural and Constructed Wetlands. Springer International Publishing Switzerland, pp. 141-146. https://doi.org/10.1007/978-3-319-38927-1_11
18. Paruch L., Paruch A.M., Blankenberg A.-G.B., Bechmann M., Mæhlum T. 2015. Application of host-specific genetic markers for microbial source tracking of faecal water contamination in an agricultural catchment. *Acta Agriculturae Scandinavica, Section B – Soil & Plant Science*, 65(S2), 164-172. <https://doi.org/10.1080/09064710.2014.941392>
19. Blankenberg A.-G., Paruch A.M., Bechmann M., Paruch L. 2015. Betydning av spredt avløp i jordbrukslandskapet (Rural decentralized wastewater treatment systems in agricultural catchments). *Vann*, 50(1), 8-17. https://vannforeningen.no/wp-content/uploads/2015/06/2015_924546.pdf
20. Paruch A.M., Mæhlum T., Robertson L. 2015. Changes in microbial quality of irrigation water under different weather conditions in Southeast Norway. *Environmental Processes*, 2(1), 115-124. <https://doi.org/10.1007/s40710-014-0054-2>

21. Paruch, A.M. 2015. Effects of temperature, storage time and pH on survival of *Escherichia coli* in source-separated yellowwater. *Water and Environment Journal*, 29(1), 98-104. <https://doi.org/10.1111/wej.12105>
22. Blankenberg, A-G.B., Haarstad K, Paruch A.M. 2015. *Agricultural Runoff in Norway: The Problem, the Regulations, and the Role of Wetlands*. In: Vymazal J. (ed) *The Role of Natural and Constructed Wetlands in Nutrient Cycling and Retention on the Landscape*. Springer International Publishing Switzerland, pp. 137-147. https://doi.org/10.1007/978-3-319-08177-9_10
23. Orzepowski W., Paruch A.M., Pulikowski K., Kowalczyk T., Pokladek R. 2014. Quantitative and qualitative assessment of agricultural water resources under variable climatic conditions of Silesian Lowlands (Southwest Poland). *Agricultural Water Management*, 138, 45-54. <https://doi.org/10.1016/j.agwat.2014.02.012>
24. Paruch A.M. 2014. The impact of wastewater irrigation on the chemical quality of groundwater. *Water and Environment Journal*, 28(4), 502-508. <https://doi.org/10.1111/wej.12064>
25. Paruch A.M. 2012. Preservation of nutrients during long-term storage of source-separated yellowwater. *Water Science and Technology*, 66(4), 804-809. <https://doi.org/10.2166/wst.2012.244>
26. Paruch A.M. Mæhlum T. 2012. Specific features of *Escherichia coli* that distinguish it from coliform and thermotolerant coliform bacteria and define it as the most accurate indicator of faecal contamination in the environment. *Ecological Indicators*, 23, 140-142. <https://doi.org/10.1016/j.ecolind.2012.03.026>
27. Blankenberg A-G., Tryland I., Paruch A., Robertson L. 2012. Virkningen av økt nedbør, en følge av klimaendring, på avrenning av tarmbakterier og parasitter fra beiteområder (The effect of heavy rainfall, a consequence of climate change, on runoff of bacteria and parasites from pastures). *Vann* 47(1), 28-38. https://vannforeningen.no/wp-content/uploads/2015/06/2012_847608.pdf
28. Paruch A.M. Mæhlum T., Obarska-Pempkowiak H., Gajewska M., Wojciechowska E., Ostojki A. 2011. Rural domestic wastewater treatment in Norway and Poland: experiences, cooperation and concepts on the improvement of constructed wetland technology. *Water Science and Technology*, 63(4), 776-781. <https://doi.org/10.2166/wst.2011.308>
29. Paruch A.M. 2011. Long-term survival of *Escherichia coli* in lightweight aggregate filter media of constructed wastewater treatment wetlands. *Water Science and Technology*, 63(3), 558-564. <https://doi.org/10.2166/wst.2011.257>
30. Jenssen P.D., Krogstad T., Paruch A.M., Mæhlum T., Adam K., Arias C.A., Heistad A., Jonsson L., Hellström D., Brix H., Yli-Halla M., Vråle L., Valve M. 2010. Filter bed systems treating domestic wastewater in the Nordic countries – Performance and reuse of filter media. *Ecological Engineering*, 36(12), 1651-1659. <https://doi.org/10.1016/j.ecoleng.2010.07.004>
31. Paruch A.M. 2010. Possible scenarios of environmental transport, occurrence and fate of helminth eggs in light weight aggregate wastewater treatment systems. *Reviews in Environmental Science and Biotechnology*, 9(1), 51-58. <https://doi.org/10.1007/s11157-009-9181-z>
32. Heistad A., Seidu R., Flø A., Paruch A.M., Hanssen J.F., Stenström T. 2009. Long-term hygienic barrier efficiency of a compact on-site wastewater treatment system. *Journal of Environmental Quality*, 38(6), 2182-2188. <https://doi.org/10.2134/jeq2008.0407>
33. Paruch A.M., Roseth R. 2008. Treatment of tunnel wash waters – experiments with organic sorbent materials. Part II: Removal of toxic metals. *Journal of Environmental Sciences*, 20(9), 1042-1045. [https://doi.org/10.1016/S1001-0742\(08\)62147-6](https://doi.org/10.1016/S1001-0742(08)62147-6)
34. Paruch A.M., Roseth R. 2008. Treatment of tunnel wash waters – experiments with organic sorbent materials. Part I: Removal of polycyclic aromatic hydrocarbons and nonpolar oil. *Journal of Environmental Sciences*, 20(8), 964-969. [https://doi.org/10.1016/S1001-0742\(08\)62194-4](https://doi.org/10.1016/S1001-0742(08)62194-4)
35. Paruch A.M., Krogstad T., Jenssen P.D. 2007. Application of used wetland filter media in agriculture - control of heavy metal contents and faecal contamination. *Ecohydrology & Hydrobiology*, 7(3-4), 243-253. [https://doi.org/10.1016/S1642-3593\(07\)70107-6](https://doi.org/10.1016/S1642-3593(07)70107-6)
36. Lindholm O., Greatorex J.M., Paruch A.M. 2007. Comparison of methods for calculation of sustainability indices for alternative sewerage systems – Theoretical and practical considerations. *Ecological Indicators*, 7(1), 71-78. <https://doi.org/10.1016/j.ecolind.2005.10.002>
37. Heistad A., Paruch A.M., Vråle L., Adam K., Jenssen P.D. 2006. A high-performance compact filter system treating domestic wastewater. *Ecological Engineering*, 28(4), 374-379. <https://doi.org/10.1016/j.ecoleng.2006.06.011>
38. Pulikowski K., Kostrzewa S., Paluch J., Paruch A. 2005. Runoff of nitrates (V) from drainage system. *Scientific Papers of the Agricultural University of Krakow*, 420, 57-66.
39. Paluch J., Kostrzewa S., Pulikowski K., Paruch A. 2005. An impact of run-off delayers on adjacent areas. *Scientific Papers of the Agricultural University of Krakow*, 420, 47-55.
40. Pulikowski K., Paluch J., Paruch A., Kostrzewa S. 2005. Time of appearing of maximal concentrations of nitrates in surface waters. *Advances of Agricultural Sciences Problem Issues*, Polish Academy of Sciences, 505, 339-346.
41. Sokalska D., Paruch A., Pulikowski K. 2004. The influence of irrigation with industrial wastewater on the quality of groundwater. *Melioration and Meadow Cultivation News*, 3, 130-133.
42. Kostrzewa S., Paluch J., Paruch A., Pulikowski K. 2003. Regeneration of areas irrigated with municipal sewage. *Acta Scientiarum Polonorum, Formatio Circumiectus*, 2(2), 93-102.

43. Palczyński M., Paluch J., Paruch A., Pulikowski K., Wojtowicz J. 2002. Hydrological aspects of operation of run-off delayers in the small forest catchment area. *Technical Journal*, Z. 5-Ś/2002, Publishing House of Cracow University of Technology, 85-95.
44. Paluch J., Palczyński M., Paruch A., Pulikowski K. 2002. The impact of water flow through run-off delayers on road embankment in the forest. *Technical Journal*, Z. 4-Ś/2002, Publishing House of Cracow University of Technology, 123-132.
45. Paruch A., Palczyński M., Paluch J., Pulikowski K. 2002. Solution for treatment of domestic wastewater from forester's houses. *Technical Journal*, Z. 4-Ś/2002, Publishing House of Cracow University of Technology, 113-122.
46. Paruch A., Paluch J., Pulikowski K., Kostrzewa S. 2002. Preliminary assessment of the impact of soil fertility on the levels of selected macrolelements in drainage runoffs. *Acta Scientiarum Polonorum, Formatio Circumiectus*, 1-2(1-2), 71-83.
47. Pulikowski K., Palczyński M., Paluch J., Paruch A. 2002. The physical and chemical composition of water in the small forest catchment area in Lower Silesia Region. *Technical Journal*, Z. 4-Ś/2002, Publishing House of Cracow University of Technology, 95-104.
48. Kutera J., Paruch A. 2001. The possibilities of *Lemna (Lemna minor)* use in processes of domestic wastewater treatment. *Advances of Agricultural Sciences Problem Issues*, Polish Academy of Sciences, 475, 155-162.
49. Paluch J., Paruch A., Pulikowski K., Palczyński M., Wojtowicz J. 2001. Preliminary estimation of effective use of retention of small catchment areas for flood protection. *Electronic Journal of Polish Agricultural Universities, Series Environmental Development*, vol. 4(2). <http://www.ejpau.media.pl/volume4/issue2/environment/art-04.html>
50. Paluch J., Pulikowski K., Paruch A., Kostrzewa S. 2001. Hydrological conditions of small agricultural catchments irrigated with Wrocław sewage. *Advances of Agricultural Sciences Problem Issues*, Polish Academy of Sciences, 475, 49-59.
51. Paruch A. 2001. The influence of irrigation with yeast wastewater on the selected properties of soil and water purity. *Scientific Papers of the Agricultural University of Wrocław – XLII*, 417, 81-103.
52. Paruch A., Paluch J., Pulikowski K. 2001. Chemical composition of drainage runoffs from objects situated in southwest Poland. *Scientific Papers of the Agricultural University of Krakow*, 21, 49-56.
53. Paruch A., Pulikowski K., Paluch J., Kostrzewa S. 2001. Chemical composition of ground waters on the objects irrigated with industrial wastewater. *Advances of Agricultural Sciences Problem Issues*, Polish Academy of Sciences, 475, 225-234.
54. Pulikowski K., Kostrzewa S., Paluch J., Paruch A. 2001. Pollutant runoff from agricultural microcatchment situated on the Sudety mountains foreland. *Advances of Agricultural Sciences Problem Issues*, Polish Academy of Sciences, 475, 489-496.
55. Czyżyk F., Paruch A. 1999. Heavy metals in soils of fields irrigated with wastes of yeast industry. *Folia Universitatis Agriculturae Stetinensis – Agricultura*, 195(74), 51-56.
56. Czyżyk F., Paruch A. 1999. Some chemical properties of soils on fields of agricultural utilisation of yeast wastes. *Annals of the Agricultural University of Poznań - CCCX*, 20(1), 7-17.

FAGARTIKLER OG KRONIKER:

1. Paruch A.M. Paruch L., Mæhlum T. 2017. Kildesporing av fekal vannforurensing med molekylærbiologiske metoder – eksempler på undersøkelser i Norge (Source tracking of faecal water contamination by molecular biology methods – examples of surveys in Norway). *Vannspeilet* 2-2017, 4-5. <https://www.norskvann.no/kompetanse/norsk-vann-bulletin>
2. Paruch A.M. Paruch L., Mæhlum T. 2014. Implementering av molekylærbiologiske metoder for kildesporing av fekal vannforurensing og vurdering av helsefare (Implementation of molecular methods for faecal source tracking of water contamination and evaluation of health risk). *Bioforsk TEMA* 9(19), 4 pp. [http://www.bioforsk.no/ikbViewer/Content/109843/Bioforsk%20TEMA%209%20\(19\).pdf](http://www.bioforsk.no/ikbViewer/Content/109843/Bioforsk%20TEMA%209%20(19).pdf)
3. Blankenberg A-G., Bechmann M., Paruch L., Paruch A. 2014. Spredt avløp i jordbrukslandskapet (Decentralised wastewater treatment systems in agricultural landscape). *Bioforsk TEMA* 9(12), 4pp. http://www.bioforsk.no/ikbViewer/Content/109416/TEMA_vol9_nr12_2014_Spredt_avlop.pdf
4. Paruch A., Mæhlum T. 2011. Fekale indikatorbakterier (Faecal indicator bacteria). *Kommunalteknikk* (9), 44-47. <http://bioweb07.bioforsk.no/Artikler/Fekale%20indikatorbakterier.pdf>
5. Paruch A., Mæhlum T. 2011. *E. coli* i avføring – er det farlig? (Defecated *E. coli* – is it dangerous?). *Nationen – Debatt* (135), p. 26.
6. Søvik A. K., Adam K., Paruch A. M. 2007. Fosforfjerning i filterbedanlegg og konstruerte våtmarker – erfaringer fra laboratorieforsøk og feltmålinger (Phosphorus removal in filter bed systems and constructed wetlands - experiences from laboratory experiments and field measurements). *Bioforsk FOKUS* 2(15), 6pp. <http://hdl.handle.net/11250/2486327>

MONOGRAFIER:

1. Paluch J., Palczyński M., Paruch A., Pulikowski K. 2005. Retention increment and water quality improvement by using run-off delayer. *Monograph XLVII*, Publishing House of the Agricultural University of Wrocław, ISBN 83-89189-82-8, 68 pp.

BØKER:

1. Paluch J., Paruch A., Pulikowski K. 2006. Environmental utilisation of wastewater and sludge. *Educational Books of the Agricultural University of Wrocław*, Publishing House of the Agricultural University of Wrocław, ISBN 83-89189-96-8.
2. Paluch J., Paruch A., Pulikowski K. 2003. Design of selected elements of wastewater treatment plant, its development and management. In: *Academic handbook for Environmental Engineering* (L. Pływaczyk, Ed.), Publishing House of the Agricultural University of Wrocław, ISBN 83-87866-89-X, 89-133.

KONFERENSEARTIKLER:

1. Paruch A. M., Krogstad T., Jenssen P. D. 2005. Reuse of wetland filter media – content of heavy metals and indicator microorganisms. In: *Wastewater treatment in wetlands – theoretical and practical aspects* (H. Obarska-Pempkowiak, Ed.). Proceedings of the International Conference, Ecological Education Center in Starbienino, Poland, 145-158.
2. Heistad A., Vråle L., Paruch A. M., Adam K., Jenssen P. D. 2005. A high performance compact wastewater treatment system using lightweight aggregate In: *Nutrient Management in Wastewater Treatment Processes and Recycle Streams*. Proceedings of IWA Specialized International Conference, Krakow, Poland, 959-966.
3. Heistad A., Vråle L., Paruch A. M., Adam K., Jenssen P. D. 2004. From constructed wetlands to compact filter systems. In: *Wetland Systems*. Proceedings of 9th International Conference on Wetland Systems for Water Pollution Control, vol. 2, IWA, Avignon, France, 759-767.
4. Paluch J., Paruch A., Pulikowski K. 2003. Treatment of domestic sewage from forester's houses. In: *Hydro-presentations VI*. Proceedings of National Symposium on Water Protection, Water Management, Water supply and Wastewater Discharge, NOT Katowice, Poland, 200-219.
5. Czyżyk F., Paruch A. 2000. Some chemical properties of drainage water from fields of agricultural utilisation of yeast wastes. In: *Land Reclamation and Landscape Management*. Proceedings of International Conference, Kaunas-Akademija, Lithuania, 25-28.
6. Adynkiewicz-Piragas M., Paruch A. 1997/98. Methodology of examinations of water conditions in the riverside forests of the Odra polder of Olawa-Lipki. In: *Diagnosing the state of the environment. Research methods – forecasts*. Proceedings of 5th National Conference on Comprehensive Research and Protection of the Natural Environment, Agricultural University of Bydgoszcz, HABITAT Bydgoszcz, Poland, 30-37.

ABSTRAKTBØKER:

1. Blankenberg A-G., Paruch L., Paruch A.M., Haarstad K., Deelstra J. 2015. Nutrients tracking and removal in constructed wetland treating catchment runoff in Norway. Book of the 9th International Workshop on Nutrients Cycling and Retention in Natural and Constructed Wetlands, Trebon, the Czech Republic, 7-9.
2. Haarstad K., Hensel G., Paruch A.M., Blankenberg A-G. 2015. Phosphorus (P) in waste, dams and wetlands receiving landfill leachate – long term monitoring in Norway. Book of the 9th International Workshop on Nutrients Cycling and Retention in Natural and Constructed Wetlands, Trebon, the Czech Republic, 30-34.
3. Paruch A.M., Mæhlum T., Hensel G., Haarstad K., Blankenberg A-G. 2015. A quarter century performance of constructed wetlands in Norway – options for nutrients removal and recycling. Book of the 9th International Workshop on Nutrients Cycling and Retention in Natural and Constructed Wetlands, Trebon, the Czech Republic, 55-58.
4. Paruch A.M. 2012. Faecal contamination with *Escherichia coli* in yellowwater intended for agricultural utilisation. In: *Wastewater Purification and Reuse*. Book of Abstracts of the IWA Regional Conference on Wastewater Purification & Reuse 2012, Heraklion, Crete, Greece, p. 145.
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6. Paruch A.M. 2010. Survival of *Escherichia coli* in Filtralite-P media from constructed wetland treating domestic wastewater in Norway. In: *New Challenges for constructed wetland systems*. Book of the International Seminar. Gdansk, Poland, p. 28.
7. Paruch A.M. 2010. The impact of wastewater irrigation on the chemical quality of groundwater. In: *Organic resources in the carbon economy*. Book of the 7th International Conference ORBIT 2010, Heraklion, Crete, Greece, p. 273.
8. Paruch A.M. 2009. Survival of *Escherichia coli* in filter media of constructed wetlands treating domestic wastewater in Norway. In: *Ecology of Pathogenic Escherichia coli*. Book of the 4th International Conference of the Pathogenic *Escherichia coli* Network (PEN), Oslo, Norway, p. 88.

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2. Haaland S., Bechmann M., Eikebrokk B., Eregno F., Greipsland I., Heistad A., Paruch A. Paruch L. Riise G., Rohrlack T., Turtumøygard S. 2018. Forurensingsanalyse av drikkevannskilden Jordalsvatnet med vanntilsigsområde. NIBIO Rapport 4/120, 86 pp.

3. Tryland I., Mæhlum T., Wennberg A.C., Paruch A.M., Krystad R., Paruch L., Ranneklev S., Fosholt Moe T., Haande S., Myrmel M, Robertson L., Fergus T., Beschoner A-L., Kvitsjøen J. 2017. Tiltak for å oppnå bedre hygienisk vannkvalitet til rekreasjonsformål i overvann og byvassdrag - forprosjekt for å identifisere forskningsbehov (Measures to achieve better hygienic water quality for recreational purposes in urban waterways - pre-project to identify research needs). NIVA-rapport 7190-2017, ISSN 1894-7948, ISBN 978-82-577-577-6925-3, 75 pp.
4. Paruch A.M., Paruch L., Mæhlum T. 2017. Kildesporing av fekal vannforurensing med molekylærbiologiske metoder – Eksempler på undersøkelser i Norge (Source tracking of faecal water contamination by molecular biology methods – Examples of surveys in Norway). NIBIO Rapport 3/66, 70 pp.
5. Paruch A.M., Paruch L., Mæhlum T. 2016. Kildesporing av fekal vannforurensing i Jordalsvatnet med nedbørfelt (Source tracking of fecal water contamination in the catchment of Jordalsvatnet lake). NIBIO Rapport 2/49, 42 pp.
6. Paruch A.M., Paruch L., Mæhlum T. 2016. Kildesporing av fekal vannforurensing i tilløpsbekkene til Jonsvannet (Source tracking of fecal water contamination in tributaries of Jonsvannet lake). NIBIO Rapport 2/34, 60 pp.
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8. Hauge A., Joner E., Paruch A. 2015. Plan for utbedring av Langerudbakkens rensepark (A plan for improving Langerudbakkens treatment park). NIBIO Rapport 1/13, 27 pp.
9. Paruch A.M., Mæhlum T., Eltun R. 2015. Implementation of the Norwegian technology of nature-based wastewater treatment systems in Romania: Management of domestic wastewater from two rural tourism facilities in Mara and Vadu Izei. Bioforsk Report 10(48), 49 pp.
10. Blankenberg A-G., Bechmann M., Turtumøygard S., Paruch A., Paruch L. 2014. Spredt avløp i jordbrukslandskapet. Tilførsel av fosfor og *E. coli* i jordbruksbekker (Decentralised wastewater treatment systems in agricultural landscape. Inputs of phosphorus and *E. coli* to agricultural streams). Bioforsk Report 9(6), 22 pp.
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12. Paruch, L., Paruch, A., Blankenberg, A-G.B., Bechmann, M. & Mæhlum, T. 2014. Application of host-specific genetic markers for microbial source tracking of faecal water contamination in agricultural catchment. NJF Report 10(3), 43-44.
13. Paruch A.M., Mæhlum T., Frantzen B., Brodersen C. 2013. Toilet options for on-site sanitation in Barents Russia. Bioforsk Report 8(10), 27 pp.
14. Paruch A.M., Borch H., Mæhlum T. 2012. Opinion on wastewater treatment options for remote settlements in Kenozero National Park (NW Russia). Bioforsk Report 7(19), 19 pp.
15. Hanserud O.S., Jenssen P.D., Paruch A.M. 2009. Forprosjekt for kretsløpsbaserte avløpsløsninger ved Tingvoll gard. Et vindu mot bærekraftig avløpsteknologi (Pilot project for recirculation technologies of wastewater at Tingvoll yard. A window toward sustainable wastewater technology). Bioforsk Report 4(96), 30 pp.
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17. Paruch A.M., Mæhlum T. 2009. Implementation of Norwegian technology for on-site systems treating wastewater from rural households in Poland: Design principles of pre-filters for domestic wastewater treatment. Bioforsk Report 4(70), 17 pp.
18. Mæhlum T., Paruch A.M., Lindholm O. 2008. Bærekraftige VA-løsninger i Nesodden kommune. Eksempler fra Blylaget og Bomannsvik (Sustainable solutions for water and wastewater management in Nesodden municipality. Exsamples from Blylaget and Bomannsvik). Bioforsk Report 3(92), 36 pp.
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20. Haarstad K., Paruch A.M., Mæhlum T. 2007. Assessment of decentralised wastewater sanitation with focus on Kenozero National Park in NW Russia. Bioforsk Report 2(49), 32 pp.
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FOREDRAG, FORELESNINGER OG PRESENTASJONER:

1. Norwegian Water Workshop (Norsk Vann Fagtreff). Gardermoen, Oslo, 24-25 October 2017. Oral presentation: *"Kildesporing av fekal vannforurensning med molekylærbiologisk metode"*.
2. National Conference of the Norwegian Society of Graduate Technical and Scientific Professionals (Tekna) "Water Supply Days 2017 (Vannforsyningsdagene 2017)". Larvik (Norway), 30-31 May 2017. Oral presentation: *"Sporing av forurensninger i drikkevannskilder. Vannkildene for Oslo, Trondheim, Bergen og Oppegård (Tracking of contamination in drinking water sources. Water sources for Oslo, Trondheim, Bergen and Oppegård)"*.
3. IWA International Conference "Wetlands Systems for Water Pollution Control". Gdansk, Poland, 4-9 September 2016. Oral presentation: *"Norwegian study on microbial source tracking for water quality control and pollution removal in constructed wetland treating catchment run-off"*.
4. National Conference "Avløpskonferansen 2016 - Små avløp, store utfordringer", Aas (Norway), 24-25 May 2016. Oral presentation: *"Kildesporing – hva er årsak til fekal forurensning?"*
5. National Conference of the Norwegian Society of Graduate Technical and Scientific Professionals (Tekna) "How to ensure good water quality to the consumer? Treats and solutions (Hvordan sikre god vannkvalitet helt frem til forbruker? Trusler og løsninger)". Trondheim (Norway), 7-8 January 2016. Oral presentation: *"Kildesporing av fekal vannforurensning. Resultater fra Bergen og Trondheim (Source tracking of faecal water pollution. Results from Bergen and Trondheim)"*.
6. National Workshop of Norwegian Water Association (Norsk vannforening) "Sources of water pollution (Forurensningskilder og fordeling)". Oslo (Norway), 12 October 2015. Oral presentation: *"Mikrobiell kildesporing av fekal vannforurensning sammen med deteksjon av legemidler og personlig pleieprodukter (Microbial source tracking of faecal water pollution and detection of pharmaceuticals and personal care products)"*.
7. International Workshop "Nutrients Cycling and Retention in Natural and Constructed Wetlands". Trebon (the Czech Republic), 26-29 March 2015. Oral presentation: *"A quarter century performance of constructed wetlands in Norway – options for nutrients removal and recycling"*.
8. National Conference "Avløpskonferansen 2014 - Små avløp, store utfordringer", Aas (Norway), 13-14 May 2014. Oral presentation: *"Hygieneparametere og sporing"*.
9. National Conference "Avløpskonferansen 2012 - Små avløp, store utfordringer", Aas (Norway), 25-26 April 2012. Oral presentation: *"Hva er gjort av forsøk/undersøkelser på hygiesiden i fht. de ulike parametere? Hva planlegges videre?"*
10. IWA Regional Conference "Wastewater Purification & Reuse 2012". Heraklion, Crete (Greece), 28-30 March 2012. Oral presentation: *"Faecal contamination with Escherichia coli in yellowwater intended for agricultural utilization"*.
11. Seminar "Water and Pathogens". Veterinary Institute in Oslo (Norway), 19 March 2012. Oral presentation: *"The effect of heavy rainfall on runoff of bacteria and parasites from pastures"*.
12. Seminar "Nordic Biochar Seminar". Norwegian Agricultural Authority in Oslo (Norway), 9-10 November 2011. Poster presentation: *"Using biochar to recycle nutrients from human urine back to agriculture"*.
13. Closing conference of the project "Innovative solutions for wastewater management in rural areas". Gutow Maly (Poland), 28 April 2011. Oral presentation: *"Norwegian technologies for decentralised wastewater treatment systems"*.
14. International Seminar "New Challenges for constructed wetland systems". Gdansk University of Technology (Poland), 30-31 August 2010. Oral presentation: *"Survival of Escherichia coli in Filtralite-P media from constructed wetland treating domestic wastewater in Norway"*.
15. International Conference "ORBIT 2010 - Organic resources in the carbon economy". Heraklion, Crete (Greece), 29 June – 03 July 2010. Oral presentation: *"The impact of wastewater irrigation on the chemical quality of groundwater"*.
16. Opening Conference of the project "Agricultural utilization of tertiary treated wastewater as an alternative water resource". Heraklion, Crete (Greece), 15 December 2009. Oral presentation: *"Norwegian experiences on wastewater reuse"*.
17. International Conference "The Ecology of Pathogenic Escherichia coli". Oslo (Norway), 5-6 March 2009. Poster presentation: *"Survival of Escherichia coli in filter media of constructed wetlands treating domestic wastewater in Norway"*.
18. Opening Conference of the project "Innovative solutions for wastewater management in rural areas". Gdynia (Poland), 24 October 2008. Oral presentation: *"Wastewater treatment in rural areas of Norway"*.

19. National Conference "Mobility of doctoral students and young researchers within the European Higher Education Area". Warsaw (Poland), 15 October 2008. Oral presentation: "*Internship - challenges and chances for young researchers in Norway*".
20. Capacity Building and Workshop Week in Environmental Monitoring of Agricultural Dominated Catchments – "Monitoring and assessment of nutrient losses from agricultural dominated catchments". Aas (Norway), 28 August – 01 September 2006. Oral presentation: "*Point source pollution in catchment runoff*".
21. International Seminar on Development of Solid Waste Management System - "International Network Building in Waste Management in Barents Region". Archangelsk (Russia), 01 Jun 2006. Oral presentation: "*Wastewater from landfills in the Arctic – occurrence, monitoring and treatment, Norwegian perspective*".
22. IWA Specialized International Conference "Nutrient Management in Wastewater Treatment Processes and Recycle Streams". Krakow (Poland), 19-21 September 2005. Oral presentation of paper: "*A high performance compact wastewater treatment system using lightweight aggregate*".
23. Research Seminar at the Department of Chemistry and Biotechnology, Agricultural University of Norway (NLH) in Aas (Norway), 23 May 2003. Poster presentation: "*Advanced technology with a simple operating system for composting various organic materials*".
24. International Scientific Conference ENVIRO 2001 "Environmental protection in aspect of sustainable development of rural areas". Agricultural University of Krakow. Nitre – Krakow (Poland), 15-16 November 2001. Oral presentation of paper: "*Chemical composition of drainage runoffs out of objects situated in south-west Poland*".
25. Scientific Conference "Disposal and recycling of liquid and solid wastes in the environment with particular attention on protection of water in rural areas". Agricultural University of Wroclaw, Wroclaw – Kudowa Zdroj (Poland), 19-21 September 2001. Oral presentation of paper: "*Chemical composition of ground waters on the objects irrigated with industrial wastewater*".
26. Scientific Conference "Environmental management of sewage and sludge e". Agricultural University of Szczecin, Szczecin – Lukecin (Poland), 31 August – 02 September 1999. Oral presentation of paper: "*Heavy metals in soils of fields irrigated with wastes of yeast industry*".
27. Scientific Conference "Protection of Tucholski Coniferous Forests – Diagnosing of the environmental level, research methods, forecasts". Agricultural University of Bydgoszcz, Bydgoszcz – Tleń (Poland), 27-28 November 1997. Oral presentation of paper: "*Methodology of examinations of water conditions in the riverside forests of the Odra river polder Olawa-Lipki*".

PROSJEKTFERANSER:

- INTERNASJONALE PROSJEKTER:

1. 2020-2023. "*BIOSHELL – Recycling crustaceans shell wastes for developing biodegradable wastewater cleaning composites*". ERA-NET BlueBio Cofund, EU's Horizon 2020 research and innovation programme under grant agreement no. 817992 (Project consortium from Romania, Portugal and Norway (A.M. Paruch – key scientist/WP leader)).
2. 2017-2020. "*Bactericidal hybrid surfaces against Gram-negative and Gram-positive pathogenic bacteria: Smart Tools for Wastewater Purification*". Project under the M-Era.Net (an EU funded network) with consortium from Romania and Norway (A.M. Paruch – leader of the project in Norway).
3. 2014-2017. "*AQUARIUS: Assessing water quality improvement options concerning nutrient and pharmaceutical contaminants in rural watersheds*". Project funded under the EEA/Norwegian Financial Mechanism (Project in the Czech Republic, A.M. Paruch – leader of the Norwegian group).
4. 2014-2016. "*Greening the agro-tourism business in Romania*". Project funded under the EEA/Norway Grants through Innovation Norway (Project in Romania, A.M. Paruch – responsible for implementing Norwegian nature-based treatment technology in rural Romania).
5. 2013-2014. "*ClimaAdapt*". Project supported by the Ministry of Foreign Affairs, Norway, through the Royal Norwegian Embassy, New Delhi (Project in India, A.M. Paruch – responsible for assessing the feasibility of establishing a pilot plant/system for treating polluted water in Tamil Nadu).
6. 2009-2012. "*Agricultural utilization of tertiary treated wastewater as an alternative water resource*". Project funded under the EEA Financial Mechanism (Project in Greece, A.M. Paruch – responsible for research tasks in Norway).
7. 2008-2011. "*NORWET - Innovative solutions for wastewater management in rural areas*". Project funded under the EEA/Norwegian Financial Mechanism (Project in Poland, A.M. Paruch – leader of the Norwegian group).
8. 2007-2009. "*An implementation of Norwegian environmental technologies for construction of on-site wastewater treatment systems in Slovenia*". Project supported through the Slovenian-Norwegian Bilateral Scientific and Technological Cooperation (Project in Slovenia, A.M. Paruch – leader of the Norwegian group).
9. 2007-2009. "*Microbial risk assessment and quality control of irrigation water*". Project supported through the Slovenian-Norwegian Bilateral Scientific and Technological Cooperation (Project in Slovenia, A.M. Paruch – leader of the Norwegian group).
10. 2007. "*Small-scale wastewater treatment solution for remote settlements – Kenozero*". Project financed out of the Barents Hot Spots Facility (Project in Russia, A.M. Paruch – leader of the Norwegian group).

- NASJONALE PROSJEKTER:

11. 2017. "Forurensningsanalyse av drikkevannskilden Jordalsvatnet med vanntilsigsområde, Bergen kommune, NOR 037-2017 (Pollution analysis of the drinking water source Jordalsvatnet with drainage basin, Bergen municipality, NOR 037-2017). Research project supported by Bergen municipality (A.M. Paruch – leader of WP3. Sykdomsfremkallende mikroorganismer – Pathogenic microorganisms).
12. 2015. "Kildesporing av fekal vannforurensing i nedbørfelt av Jordalsvatnet" (Source tracking of fecal water contamination in the catchment of Jordalsvatnet lake). Research project supported by Bergen municipality (A.M. Paruch – leader of the project).
13. 2015. "Kildesporing av fekal vannforurensing i tilløpsbekkene til Jonsvannet" (Source tracking of fecal water contamination in tributaries of Jonsvannet lake). Research project supported by Trondheim municipality (A.M. Paruch – leader of the project).
14. 2014-2015. "Kildesporing av fekal vannforurensing i noen av tilløpsbekkene til Maridalsvannet og utløp Akerselva" (Source tracking of fecal water contamination in some tributaries of the Maridal lake and the mouth of the Aker river). Research project supported by Oslo municipality (A.M. Paruch – leader of the project).
15. 2006-2010. "Recycling organic waste – effects on soil quality, plant nutrient supply and environmental impact". Strategic Institute Plan (SIP). Research project supported by the Research Council of Norway (A.M. Paruch – leader of WP 2."Ecological sanitation – recycling of resources in wastewater").
16. 2008. "Sustainable solutions for wastewater treatment in Nesodden municipality". Municipal project (A.M. Paruch – project participant).
17. 2006-2007. "Reuse of Filtralite from filter bed systems". Company project - maxit Group AB (A.M. Paruch – leader of the project).
18. 2005-2006. "Testing filter media for treatment of wash water from road tunnels". Project for the Norwegian Public Roads Administration (A.M. Paruch – project participant).
19. 2003-2005. "Organic Waste Products and Recycling of Resources: ORIO II" (A.M. Paruch – contractor at the Norwegian University of Life Sciences – UMB, Department of Mathematical Sciences and Technology - IMT).
20. 2002-2003. "Testing of composting reactor for NOPRO Notodden AS Company". R&D project for NOPRO Notodden AS Company (A.M. Paruch – participant in the project activities performed at the Agricultural University of Norway – NLH, Department of Chemistry and Biotechnology – IKB).