

CURRICULUM VITAE

1. NAME, CONTACT INFORMATION AND DATE

Name PONGRÁCZ, Eva
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2. EDUCATION AND DEGREES AWARDED

Doctor of Science in Technology (D.Sc.(Tech.)), 21.11. 2002

University of Oulu, Department of Process and Environmental Engineering (1.10.1996-25.9.2002)
Major subject: environmental engineering, specialisation in waste management

Licentiate of Science in Technology (Lic.Sc.(Tech.)), 27.2.1998

Tampere University of Technology, Department of Environmental Technology,
Institute of Water and Environmental Engineering (1.9.1994 – 30.6.1996)
Major subject: environmental technology, minor: environmental management

Doctor Universitatis in Environmental Economics (Dr. Univ.), 18.12.1996, Grade: Summa cum laude (5/5)

Budapest University of Technology, Faculty of Natural and Social Sciences,
Institute of Environmental Economics (1.9.1993 – 30.6.1996)
Major: environmental economics, Minors: environmentally friendly materials, environmental ethics

Master of Science in Engineering (M.Sc.(Eng.)) 21.6.1991, Grade: excellent (5/5)

Budapest University of Technology, Faculty of Mechanical Engineering,
Department of Industrial Management and Business Economics (1.9.1984-21.6.1991)
Majors: production system management, organisation theory, machine structure science.

Title of docent: Industrial environmental engineering, especially industrial ecology and resources management in production processes;

University of Oulu, Department of Process and Environmental Engineering, 1.3.2007

3. LINGUISTIC SKILLS

Hungarian (mother tongue), English (excellent), Finnish (excellent), Slovakian (excellent)

4. CURRENT POSITION

Development manager, Director of the Centre of Northern Environmental Technology (NorTech Oulu);

University of Oulu, Thule Institute, 1.2.2008-

Research career phase: R4-Leading researcher

6. PREVIOUS WORK EXPERIENCE

1.-31.1.2008: *University researcher*; UOulu, Mass and Heat Transfer Process Laboratory (MHTPL),
1.10.2002 -31.12.2007: *Research Doctor*, Academy of Finland, at UOulu, MHTPL,
1.3.-30.31.9. 2002: *Scholarship researcher* UOulu, CPEL (finalizing doctoral dissertation)
1.8.2001-28.2. 2002: *Assistant*, UOulu, Industrial Environmental Engineering (IEE),
1.3.2000-31.5.2001: *Researcher*, UOulu, Chemical Process Engineering Laboratory (CPEL),
1.11.1998-28.2.2000: *Special researcher*, UOulu, IEE
1.3.-30.10.1998: *Scholarship researcher* (Oulun yliopiston tukisäätiö funding for doctoral studies)
1.10.1996-28.2.1998: *Assistant*, UOulu, CPEL
1.9.1993- 30.6.1996: *Scholarship researcher* (IAESTE and CIMO funding for licentiate studies)

7. RESEARCH FUNDING, LEADERSHIP AND SUPERVISION

Received funding

- **Green cities and settlements – Sustainable spatial development in remote border areas**
 - Karelia ENPI CBC Programme, 2011-2014, 461 000€
- **Biorefinery and sustainable waste management solutions for tourist centres of Lapland**
 - Maj and Tor Nessling Foundation, 2010 – 2013, 48 300€
- **Finnish-Russian joint master degrees in environmental engineering and social work**
 - Ministry of Foreign Affairs of Finland, 2008-2012, 435 400 €
- **Towards utilisation of Carbon Dioxide as a green and versatile commodity chemical: Clean synthesis of Methanol and Dimethyl Carbonate (CO2UTIL)**

- Academy of Finland, 2007-2012, 416 020 €
- **Greening the chemical industry – Use of separation technologies for waste minimisation**
 - Academy of Finland, 2006-2009, 236 200 €, Nessling Foundation, 2006-2008, 75 000€
- **Profiling energy- research and educational activities at the University of Oulu (EnePro)**
 - EU Regional Development Fund and local energy companies, 2007-2009, 58 000€
- **Multidisciplinary Consortium for Resources use Optimization, (RESOPT)**
 - Ministry of Environment, July 2003-June 2005, 140 000 €
- **Novel approach to prevent and recover Waste Electronic and Electric Equipment of Nokia Corporations (research doctor funding)**
 - The Academy of Finland, 1.10.2002-30.9.2004, 88 560 € (responsible leader Prof. Jouko Härkki) and 1.10.2004-31.12.2006, 102 000 € (responsible leader Prof. Riitta Keiski)

Role in other projects

- **Sustainable processing of natural resources (SusProc)**
 - Academy of Finland, KETJU programme, 2007-2011, project group leader; share of funding: 93 070€
 - PI: Prof. Marja Lajunen, UOulu
- **Sustaining carbonic esters synthesis with carbon dioxide feedstock, SUSE**
 - Academy of Finland, KETJU programme, Finnish-French joint call, 2009-2011, research advisor
 - PI: Prof. Riitta L. Keiski, UOulu
- **Sustaining Micro Waste to Energy Business: Micro energy to rural enterprise (MicrE)**
 - Interreg IIIB Northern Periphery Programme, 2009-2011, project group leader; 218 342€
 - PI: Ville Kuittinen, NKUAS
- **Future Biorefineries (FuBio JR2)**
 - Forestcluster Oy, 2011-2013, WP3 task 3 member
 - Program manager: Annaleena Kokko, VTT
- **Winter operability of electric vehicles (WintEVE)**
 - Tekes, 2012-2013, project group member; ~20 000€
 - PI: Sakari Nokonen, CENTRIA
- **Forerunners to promote best ecological practices – Carbon-neutral municipalities**
 - SYKE&SITRA, 2011, project group member; 8 000€
 - PI: Panu Kontio, SYKE
- **Enhancement of Oil Spill Response System by Establishing Oil Database**
 - Kolarctic ENPI, 2012-2014, project group leader; ~40 000€
 - PI: Raisa Ripachova, MCSM, Russia
- **Energy efficiency inspection training and demonstration in the Republic of Karelia**
 - Karelia ENPI CBC Programme, 2012-2014, project group leader; ~60 000€
 - PI: Anton Posudnev, Petrozavodsk State University, Russia
- **Water Asset Renewable Energy Resource (WARES)**
 - Interreg IIIB Northern Periphery Programme, 2012-2014, project group leader; 100 570€
 - PI: Nick Lyth, IRRI, United Kingdom
- **Roadmap to a smart Arctic specialization (SMARCTIC)**
 - Tekes strategic project, 2012-2014, WP4 leader; 140 000€
 - PI: Pekka Tervonen, UOulu
- **Sustainable bioenergy solutions for tomorrow (BEST)**
 - FIBIC&CLEEN joint programme, 2013-2014, WP1&WP4 partake, Task 4.7 leader; 172 000€
 - Programme manager: Kaisu Leppänen, Spinverse

Research leadership

- **LUMINOUS Research Community leader**
 - RC consists of 11 groups, and 120 researchers centred around the theme *Sustainable Northern Communities: Integrating smart systems, structures and change*, registered: 7.1.2013
- **Thule Doctoral Programme, Sustainable Resources Management -theme leader, 1.9.2013-**

Supervision of post-doctoral researchers:

1. Antonio Caló, *Smart energy networks in the North: Environmental performance and technological challenges*, 1.1.2012-
2. Sari Piippo, *Sustainable bio-economy: Bio-waste management and cascade use of biomass*, 1.1.2013-

Appointed supervisor of doctoral theses:

1. Saavalainen Paula, *Sustainability Indicators for chemical industry*, UOulu, DPEE, 2009- (Supervisor: Prof. R. Keiski) – to be finalized in 2015
2. Jean-Nicolas Louis, *Smart buildings integrated in a smart energy network - Modelling and sustainability assessment* UniOGS, 2012- (Advisors: Dr. Antonio. Caló and Prof. Kauko Leiviskä)
3. Ylä-Mella Jenni, *Sustainable waste management in the North - Legislative constraints and consumer perception* UniOGS, 2013- (Advisor: Riitta L. Keiski)
4. Arttu Juntunen, *Smart district heating networks in the North: Measurement quality verification and energy storage function*, 2013- (Advisor: Prof. Kauko Leiviskä)
5. Pablo Piñero, *Assessing the environmental impacts of material flows*, UniOGS 2014- (Advisors: Prof. Ilmo Mäenpää, Prof. Artti Juutinen)

Appointed supervisor of Master's Theses:

1. Heidi Kauppila (2011) *Strategic waste management planning*. UOulu, DPEE (Advisors: Jari Hänninen and Pekka Kärkkäinen, Halpa Halli Oy)
2. Antonio Caló (2011) *Assessing the potential of smart energy grids in the Northern Periphery*, UOulu, DPEE (Advisors: Prof. Rauli Svento, Oulu Business School and Esko Juuso UO, DPEE)
3. Ioannis Chamilos (2011) *Resource efficiency in an urban context: Defining the framework of ecocities*. UOulu, DPEE. (Advisor: Prof. Helka-Lisa Hentilä, Dept. of Architecture)
4. Sari Piippo (2012) *Municipal solid waste management in sparsely populated Northern areas*. UOulu, DPEE. (Advisors: Paula Saavalainen and Juhani Kaakinen)
5. Jean-Nicolas Louis (2012) *Smart buildings to improve energy efficiency in the residential sector*. UOulu, DPEE (Advisor: Antonio Caló and Esko Juuso)
6. Lauri Mikkonen (2013) *The utilization of renewable energy potential in water utilities in Northern Finland*. UOulu, DPEE (Advisors: Jaakko Rämö and Riitta L. Keiski)
7. Noora Miilumäki, *Life cycle assessment of a novel food packaging solution* – in progress.

Advised doctoral theses:

1. García Verónica (2009) *Reclamation of VOCs, n-butanol and dichloromethane, from sodium chloride containing mixtures by pervaporation. Towards efficient use of resources in the chemical industry*, UOulu, DPEE, (Supervisor: Prof. R. Keiski, thesis accepted with honours)
2. Landaburu-Aguirre Junkal (2012) *Micellar-enhanced ultrafiltration for the removal of heavy metals from phosphorous-rich wastewaters. From end-of-pipe to clean technology*, UOulu, DPEE, (Supervisor: Prof. R. Keiski, thesis accepted with honours)

Advised Licentiate Theses:

1. Mikkonen, Helmi (2006) *Processing of young shoots of Norway spruce for food applications*, University of Oulu, Department of Process and Environmental Engineering. (Supervisor: Prof. Riitta Keiski, advisor also Lic.Sc.(Tech.) Liisa Myllykoski)
2. Ylä-Mella, Jenni (2012) *The Impact of the WEEE and RoHS Directives: Development of WEEE Recovery Infrastructure in Finland*, University of Oulu, Department of Process and Environmental Engineering. (Supervisor: Prof. Riitta Keiski)

Advisor of doctoral studies:

1. Suopajarvi, Hannu, *Biomass use in the metallurgical industry, sustainability assessment framework*, UOulu, DPEE, 2011- (Supervisor: Prof. Timo Fabritius) – to be finalized in 2014.
2. Pap Nóra, *Environmental Best Practice technologies in food industry for waste minimization and utilization*, UOulu, DPEE, GSCE, 2003-(Supervisor: Prof. R. Keiski, advisor also Prof. Gyula Vatai, Corvinus University, Budapest, Hungary)

8. MERITS IN TEACHING

Teaching portfolio:

- **Research plan seminar of the Thule Doctoral Programme - 4 ECTS**
 - Doctoral course, UOulu, Thule DP
 - Sustainable resources management theme responsible, lecturer (3h), 2013-
- **Waste Minimization and Resources Use Optimization - 3 ECTS**
 - Doctoral course, UOulu, DPEE
 - Course planner, lecturer (10-20h), examiner, organized 4 times, 2004-

- **Industrial Ecology - 5 ECTS**
 - Advanced course, UOulu, DPEE, Industrial Environmental Engineering Master's Programme
 - Course planner, lecturer (15h), examiner, organized yearly, 2001-
- **Environmental issues of the Barents region - 5 ECTS**
 - Advanced course, Barents Environmental Engineering Master's Degree Programme, UOulu, DPEE
 - Course planner, lecturer (10 h), examiner, organized yearly, 2010-
- **Sustainable development - 3 ECTS**
 - Subject course, Barents Environmental Engineering Master's Degree Programme, UOulu, DPEE
 - Course planner, lecturer (10h), examiner, organized yearly, 2009-
- **Introduction to the environmental and socio-economic issues of the Barents region - 2 ECTS**
 - Subject course, Barents Environmental Engineering Master's Degree Programme, UOulu, DPEE
 - Course planner, lecturer (2h), organized yearly, 2009-
- **Industrial and municipal waste management - 5 ECTS**
 - Subject course, course lecturer (5h), organized yearly, 2010-

Advised Master's Theses:

1. Ylä-Mella Jenni (2002) *Recycling of plastics recovered from Waste Electrical and Electronic Equipment*, University of Oulu, Department of Process and Environmental Engineering (UO/DPEE), (SV: R. Keiski, UO/DPEE; advisor also M.Sc.(Eng.) Kalevi Leskinen, EcoElectronics Company)
2. Mikkola Teemu (2004) *Strategic waste minimization as a tool of industrial environmental management*, University of Oulu, Department of Process and Environmental Engineering. (SV: R. Keiski, advisor also M.Sc.(Chem.) Sisko Kvist, JAT Consulting)
3. Olgyaiová Kristina (2005) *Analysing the environmental awareness in Czech companies, Comparison with Finland*, Masaryk University, Faculty of Economics and Administration, Czech Republic. (SV: PhD Radoslav Škapa, Masaryk University)
4. Poikela Kari (2005) *Utilization of industrial waste in Oulu region: Exploring new business potential*, University of Oulu, Department of Industrial Management (UO/DIM). (SV: Dr Ulla Lehtinen, UO/DIM)
5. Kanala, Heidi (2006) *Application of membrane technologies for the treatment of wastewaters from fine chemicals industry*, University of Oulu, Department of Process and Environmental Engineering. (SV: Prof. R.Keiski, advisor also D.Sc.(Tech.) Pekka Oinas, KemFine Oy Company)
6. Häyrynen, Katri (2006) *Evaluation of separation processes to concentrate nutrients in mine water for their subsequent biological treatment*, University of Oulu, Department of Process and Environmental Engineering. (SV: R. Keiski, adv. PhD Gennadi Zaitsev METLA, D.Sc.(Tech.) and Jörg Langwaldt GTK)
7. Petänen, Antti (2008) *Environmental risk analysis of an integrated pulp and paper mill* (SV: R.Keiski, advisor also environmental manager Mervi Partanen Stora Enso Pulp Mill)
8. Myllyoja, Jouko (2009) *Assessing the market potential of environmental innovations*. (SV: R. Keiski, advisor also Dr. Annele Eerola VTT)
9. Malo, Laura (2009) *Carbon balance of dispersion coated barrier board* (SV: R.Keiski, advisor also Virpi Väisänen and Sirkku Pitkola, Stromsdal Oy)
10. Häyrynen, Piia (2010) *Simultaneous removal of heavy metals by Micellar-Enhanced Ultrafiltration* (SV: R. Keiski, advisors: Junkal Landaburu-Aguirre UOulu; René Malberg and Timo Stranius, Yara Oy)
11. Kauriinoja, Anu (2010) *Small-scale biomass-to-energy solutions for Northern Periphery areas* (SV: R. Keiski and Dr. Mika Huuhtanen)
12. Myllykoski Hanna (2010) *Joint treatment of metalliferous industrial waste waters* (SV: RKeiski, in collaboration with Boliden Kokkola Oy and OMG Kokkola Chemicals Oy)
13. Johannes Ritamäki (2011) *Waste material mediated CO₂ capture and storage* (SV: R.Keiski, advisor also Prof. J-P Mikkola and Dr. M. Huuhtanen)
14. Paula Perälä (2012) *The effect of European Union sustainability criteria on the use of wood as a fuel in CHP plants*. (SV: R. Keiski, advisors also Paula Saavalainen and Johanna Niemistö from UOulu, as well as Risto Ryymin and Tero Saarno from Jyväskylän Energia)
15. Tiina Ruuskanen (2013) *Kierrätysmateriaaleja hyödyntävien kasvualustojen tuotantoprosessin ympäristö- ja yhteiskunnallinen kustannus-hyötyanalyysi*. (SV: R. Keiski, advisors Prof. Sirpa Kurppa and Paula Saavalainen)
16. Linda Omodara (2013) *Sustainability assessment of formic acid production: Comparison of CO₂-based and conventional processes*. (Supervisor R. Keiski, advisors also Paula Saavalainen and Esa Turpeinen)
17. Mika Rantala (2013) *Planning the expansion of Oulu Waste Management Company's Rusko Waste Centre* (in Finnish) (SV: Prof. Kauko Kujala, advisor also Anne Tuomela)
18. Victor Pavlov. *Water Asset Utilization for Renewable Energy Generation in the Northern Periphery Region* – in progress (SV: Björn Klöve)

9. ACADEMIC AND PROFESSIONAL TASKS, MERITS AND ACTIVITIES

Qualification for professor post

- Environmental engineering, esp. waste treatment and utilization, Lappeenranta Univ. of Technology, 2009

Pre-examiner

- Doctoral dissertation evaluation:
 - Laura Sokka: Local systems, global impacts – using life-cycle assessment in analysing the potential and constraints of industrial symbioses, University of Helsinki, Environmental sciences, Sept. 2010
- Licentiate thesis evaluation
 - Johanna Kärkkäinen: Microwave-assisted preparations of some imidazolium-based ionic liquids and their characterisation, University of Oulu, Faculty of Natural Sciences, March 2006

Professional tasks

- Member of the scientific committee of the International Solid Waste Technology and Management conference (organizer: Widener University, Philadelphia, PA, USA) 2007-
- Member of the steering committee of the North Ostrobothnia Regional Environmental Centre, 2008-2009
- Vice-member of the steering committee of the Barents Cross-Border University (BCBU) (UOulu and ULapland) 2009-2013
- Programme director, *Environmental Technology Development Programme*, 2009-2013
- Member of the Oulu University of Applied Sciences *Sustainable production, environment and energy* focus area “Dream Team” (steering committee), 2010-2011
- Member of the low carbon economy work group, University of Oulu, 2014-2016

Journal editorial

- Editorial Board Member, *Progress in Industrial Ecology, An International Journal*, 2006-
- Editorial Advisory Panel member (corresponding), *Waste and Resources Management*, journal of the Institution of Civil Engineers, 2005-2010
- Regular reviewer for: *Journal of Cleaner Production*, *Waste Management & Research*, *Journal of Solid Waste Technology and Management*, *Waste and Resources Management*, *Journal of Industrial Ecology*

10. PUBLICATION DATA

- Volume of publications: over 100 scientific publications, including 40 peer-reviewed publications in international scientific journals and peer-reviewed proceeding, 4 monographs and 5 scientific edited volumes.
- Most cited publications:
 1. Raudaskoski, Turpeinen, Lenkkeri, Pongrácz, Keiski (2009) Catalytic activation of CO₂ **Catalysis Today**, 144(3-4): 318-323. (IF: 2.98) Cited: 35
 2. Landaburu, García, Pongrácz, Keiski (2009) The removal of Zinc from synthetic wastewaters by MEUF... **Desalination**, 240(1-3): 262-269. (IF: 3) Cited: 21
 3. Turpeinen, Raudaskoski, Pongrácz, Keiski (2008) Thermodynamic analysis of conversion of alternative hydrocarbon-based feedstocks to hydrogen. **Int. J. Hydr. En.** 33(22): 6635-6643. (IF: 4.054) Cited: 20
 4. García, Pongrácz, Muurinen, Keiski (2009) Recovery of n-butanol from high salt containing solutions ... **Desalination** 241(1-3): 201-211. (IF: 3), Cited: 18
 5. Landaburu, Pongrácz, Perämäki, Keiski (2010) Micellar-enhanced ultrafiltration... **J. Hazardous Materials** 280(1-3): 524-534. (IF: 4.173) Cited: 15
 6. Pongrácz, Pohjola (2004) Re-defining waste... **Resourc Conserv Recy.** 40(2):141-153. (IF: 2.3) Cited: 12
 7. García, Pongrácz, Muurinen, Keiski (2009) Pervaporation of dichloromethane from multicomponent aqueous systems.... **J. Membrane Science** 326(1): 92-102. (IF: 4.1), Cited: 12
 8. Pap, Pongrácz, Jaakkola, Tolonen, Virtanen, Turkki, Horváth-Hovorka, Vatai, Keiski (2010) The effect of pre-treatment on the anthocyanin and flavonols... **J. Food Eng.** 98(4): 429-436. (IF: 2.27) Cited: 10
 9. Häyrynen, Langwaldt, Pongrácz, Väisänen, Mänttari, Keiski (2008) Separation of nutrients from mine water... **Minerals Engineering**, 21(1): 2-9. (IF: 1.2), Cited: 9
 10. Pongrácz (2002) ... Evolving the Theory of Waste Management. Doctoral dissertation, scientific monograph. University of Oulu, **Acta Universitatis Ouluensis**. 20+ citations (mostly dissertations)

23.3.2014