

Curriculum Vitae

Contact details

Email
Address
Phone

Maryna Peter-Varbanets

born Dec. 1981, Pripjat, Ukraine

maryna.peter@eawag.ch

Eawag, Überlandstr. 133, CH-8600 Dübendorf
+ 41 58 765 5074

Education

07/2010

Ph.D. in Environmental Engineering at Eawag:
Swiss Federal Institute of Aquatic Science and
Technology and Institute of Environmental
Engineering, ETH Zurich

07/2005

Master degree with distinction in Chemical
Technology and Engineering at National Technical
University of Ukraine NTUU "KPI"

06/2003

Bachelor degree with distinction in Chemical
Technology and Engineering at National Technical
University of Ukraine NTUU "KPI"

08/1987 - 06/1998

Secondary School and Gymnasium in Kyiv, Ukraine

Practical experience

07/2010 - present

Postdoctoral researcher at Eawag, Department of
Water and Sanitation in Developing Countries

01/2006 – 06/2010

PhD student at Eawag, Department of Process
Engineering

09/2004 - 06/2005

Teaching assistant at National Technical University
of Ukraine NTUU "KPI" , Kyiv, Ukraine

07/2003 - 06/2004

Internship at Clariant, Switzerland

03/2002 - 06/2003

Undergraduate teaching assistant at National
Technical University of Ukraine NTUU "KPI" , Kyiv,
Ukraine

07/2002 - 06/2005

Undergraduate research assistant at NTUU "KPI",
Kyiv Ukraine

02/2002 - 08/2002

Internship at Ukrwodobezpeka Ltd., Kyiv Ukraine

Projects

07/2010-present	Gravity-Driven Membrane Disinfection for Household Treatment of Drinking Water in Kenya (Eawag project)
07/2010-08/2011	In-line coagulation/ultrafiltration for drinking water treatment in Switzerland (BAFU, joint project with Membratec)
08/2009-04/2010	SELF - independent cell for living and working (joint project of Empa, Eawag and Zurich University of Arts)
01/2006-06/2010	EU Project TECHNEAU (Technology Enabled Universal Access to Safe Water), WP2.5: Compact units for decentralized supply. Development of the Gravity-Driven Membrane filter for household water treatment in developing countries
01/2007-01/2008	POUS: The role and potential of point-of-use systems in urban water supply systems in low- and middle income countries (Eawag project)
01/2006 - 06/2006	EU Project TECHNEAU, WA1: Rethink the system: Global trends affecting the water cycle
07/2002 - 06/2005	NTUU"KPI" project: Solvent sublation for industrial wastewater treatment
07/2003 - 06/2004	Clariant AG: Optimization of an industrial synthesis of polymers for paper and textile industry
02/2002 - 08/2002	Ukrwodbezpeka Ltd., Kyiv : Bactericidal polymers for drinking water disinfection

Further education

2009, Spring Semester	World food affairs and agricultural markets, ETH Zurich
8-15 March, 2009	Water and Sanitation Engineering, from Emergency towards Development, University of Neuchatel and International Committee of Red Cross
14-16 May, 2008	PEAK course, Eawag: Household Centred Concepts and Technologies for Water and Environmental Sanitation in Developing Countries
2006, Spring Semester	Life cycle assessment, ETH Zurich
2006, Spring semester	Project on Urban Water management, ETH Zurich
2006	English presentation and communication course, Eawag

Publications

Professional journals

Peter-Varbanets, M., Margot, J., Traber, J., Pronk, W., (2011) Mechanisms of membrane fouling during ultra-low pressure ultrafiltration, *Journal of Membrane Science*, *Journal of Membrane Science* 377 (2011) 42– 53.

Peter-Varbanets, M., Hammes, F., Vital, M., Pronk, W. (2010) Stabilization of flux during dead-end ultra-low pressure ultrafiltration, *Water Research* 44, 3607-3616. (times cited: 7)

Peter-Varbanets, M., Zurbrügg, C., Swartz, C., Pronk, W. (2009) Review: Decentralized systems for potable water and the potential of membrane technology. *Water Research* 43, 245-265. (times cited: 18)

Peter-Varbanets, M., Gujer, W., Pronk, W., Intermittent operation of ultra-low pressure ultrafiltration, *Water Research*, in press

Peter-Varbanets, M., Koetzsch, S., Derlon, N. Retention of MS2 coliphage by Micro and Ultrafiltration membranes during gravity driven membrane (GDM) filtration, in preparation

Derlon, N., Peter-Varbanets, M., Pronk, W., Morgenroth, E. Heterogeneous biofilms can help to stabilize long-term flux in gravity-driven dead-end ultrafiltration systems: How does predation influence the biofouling layer structure? Submitted to *Water Research*

Boulestreau, M., Hoa, E., Peter, M., Pronk, W., Rajagopaul, R., Lesjean, B. Operation of Gravity-driven Ultrafiltration prototype for Decentralised Water Supply, accepted to *Desalination*

Pronk, W., Peter-Varbanets, M., Schwerkraftgetriebene Ultrafiltration für die dezentrale Trinkwasseraufbereitung, *GWA*, 2010 (1) 19-22.

Obushenko, T.I., Astrelin, I.M., Tolstopalova, N.M., Varbanets, M.A., Kondratenko, T.A. (2008) Treatment of toxic metals in industrial wastewaters by floextractation, *Journal of Water Chemistry and Technology*, 30 (4) 241-245

Conference proceedings and books

Peter-Varbanets, M., Johnston, R., Meierhofer, R., Kage, F., Pronk, W. Gravity-driven membrane disinfection for household drinking water treatment, accepted for publication in proceedings of 35th Water, Engineering and Development (WEDC) International Conference, Loughborough, UK, 2011

Peter-Varbanets, M., Borkmann, K., Pronk, W. (2009) Low-pressure ultrafiltration and membrane fouling by polysaccharides. in "Techneau: Safe Drinking Water from Source to Tap. State of the Art and Perspectives", ed. T. van den Hoven, C. Kazner, IWA Publishing, London, 2009.

Peter-Varbanets, M., Mudryk, R., Pronk, W. (2009) Operation and maintenance of decentralized drinking water treatment systems based on ultra-low pressure ultrafiltration, WISA Membrane Technology Conference, 13-15. May, 2009, Stellenbosch, South Africa

Hoa, E., Peter, M., Pred`home, L., Lesjean, B., Tazi-Pain, A (2009) First results of a 5m³/d gravity-driven ultrafiltration for decentralized water supply. in "Techneau: Safe Drinking Water from Source to Tap. State of the Art and Perspectives", ed. T. van den Hoven, C. Kazner, IWA Publishing, London, 2009.

Other

Peter, M. Ultra-low Pressure Ultrafiltration for Decentralized Drinking Water Treatment, A dissertation submitted to ETH Zurich for the degree of Doctor of Sciences, 2010.

Homepage: www.eawag.ch/membranefilter

Technical Reports

Peter-Varbanets, M., Pronk, W. (2010) Report on the efficiency and limitations of the POU systems based on the ultra-low pressure ultrafiltration technology. Final report for Techneau D.2.5.15

Peter-Varbanets, M., Pronk, W. (2008) Mechanisms of biofouling of UF membranes and evaluation of pretreatment on fouling of UF membranes. Techneau D. 2.5.6, D.2.5.8, D.2.5.10

Peter-Varbanets, M., Borkmann, K., Pronk, W. (2007) NOM-fouling in low flux UF membrane systems. Techneau D.2.5.7

Zuleeg, S., Peter, M., Pronk, W. (2006) Report on trends in Central Europe (Germany/Switzerland). Techneau D.1.1.5b.

Varbanets, M., Pronk, W. (2006) Point-of-use membrane systems: place in the world of water supply. Techneau D.2.5.2

Oral presentations on conferences, workshops, courses

6th IWA Specialist Conference on Membrane Technology for Water & Wastewater Treatment, Aachen, Germany, October 2011

35th Water, Engineering and Development (WEDC) International Conference, Loughborough, UK, July 2011

Launch of the Gravity-Driven Membrane Filter project in Kenya, Nairobi, Kenya, November 2011

Eawag PEAK course: Improvement of Drinking Water Quality in Developing Countries, October 2010

Membranes in Drinking and Industrial Water Treatment Conference, MDIW, Trondheim, Norway, June 2010

SVGW-Eawag Fachtagung "Membranetechnologie", Dübendorf, Switzerland, November 2009

WISA Membrane Technology Conference, Stellenbosch, South Africa, May 2009

International Congress on Membranes and Membran processes, ICOM, Honolulu, USA, July 2008, keynote presentation

Eawag PEAK course: Household Centred Concepts and Technologies for Water and Environmental Sanitation in Developing Countries, Dübendorf, Switzerland, May 2008

Techneau 3S Task force "Small Scale Systems", Workshop, Tabor, Czech Republic, June, 2008

Techneau 3S Task force "Small Scale Systems", Workshop, Berlin, 2007, workshop moderator

Water Science and Technology Conference, Dnepropetrovsk, Ukraine, May 2003

Young scientists and PhD student conferences in Kyiv, Ukraine in the period of 2003-2005 and in Switzerland and Germany in the period of 2006-2010.

Reviewer

Water Research, Journal of Membrane Science, Desalination

Languages

Ukrainian, Russian, English, German