Curriculum Vitae

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Personal Data

Fist name: Yevheniya

Surname: Volchko

Date of Birth: 1979-06-15

Date of doctoral exam: 2014-06-10

Nationality: Ukrainian

Education

2014	PhD in Civil and Environmental Engineering, Chalmers University of Technology, Gothenburg, Sweden.
	Thesis: Assessing Soil Functions for Sustainable Remediation of Contaminated Sites.
2010	Candidate of Sciences (Licentiate Eng.), Kyiv National University of Construction and Architecture, Kyiv, Ukraine.
	Thesis: Research of Manmade Environmental Impact on Market Value of Urban Land.
2008	Master of Science with a major in the Built Environment, Royal Institute of Technology (KTH), Stockholm, Sweden.
	Thesis: The Influence of Technogenic (Manmade) Emergency on Market Values of Real Estate.
2001	Master of Science with a major in Geodesy, Cartography and Land Management, National University “Lviv Polytechnic”, Institute of Geodesy, Lviv, Ukraine.
	Thesis: The Methodology of Creating the DEM-based Slope and Hillshade Maps.

Work experience

2017-	Researcher, Engineering Geology research group, FRIST, Department of Architecture and Civil Engineering, Chalmers University of Technology
2014- 2017	Post-doc, FRIST (Forum for Risk Investigation and Soil Treatment), Chalmers University of Technology, Gothenburg, Sweden.
2010-2014	PhD candidate, Department of Civil and Environmental Engineering, FRIST (Forum for Risk Investigation and Soil Treatment), Chalmers University of Technology, Gothenburg, Sweden.
2010	Project assistant, FRIST (Forum for Risk Investigation and Soil Treatment), Chalmers University of Technology, Gothenburg, Sweden.
2009	Consultant in land management, Scientific Production Company “Doka” Ltd., Lviv, Ukraine.
2002-2009	Postgraduate student (aspirant) at the Department of Geoinformation Systems and Land Management, Kyiv National University of Construction and Architecture, Kyiv, Ukraine.
2001-2008	Research assistant, Institute of geodesy and cartography, Kyiv, Ukraine.

Participation in projects

2020	Societal values and consequences of integrating geosystem services into subsurface planning. Funded by Swedish Research Council Formas.
2019-	Enhancing ecosystem services by innovative remediation using gentle remediation options - ECO-GRO. Funded by Swedish Research Council Formas.
2017-	Opportunities for preparing urban contaminated land for bio-based production. Funded by Swedish Research Council Formas.
2016-	REMCOST: Accurate Estimations of Remediation Costs at Contaminated Sites. Funded by Swedish Research Council Formas.
2016-2020	Sustainable Use of Underground Space. Funded by Swedish Research Council Formas.
2015-2018	APPLICERA: Applicable site-specific environmental risk assessment of contaminated soils. Funded by Swedish Research Council Formas.
2015-2018	SAFIRE: Sustainability Assessment For Improved Remediation Efficiency. Funded by Swedish Research Council Formas.
2014-2015	Balance 4P: Balancing decisions for urban brownfield regeneration – people, planet, profit and processes. Funded by SNOWMAN network.
2010-2013	Multi-Criteria Analysis for identifying sustainable remediation alternatives, Chalmers University of Technology, Gothenburg, Sweden. Funded by Swedish Research Council Formas.
2010-2013	Multi-Criteria Analysis (MCA) of remediation alternatives to access their overall impact and cost/benefit, with focus on soil function (services and goods) and sustainability. Funded by SNOWMAN network.
2004-2009	Management of contaminated land for urban sustainability, Kyiv National University of Construction and Architecture, Kyiv, Ukraine. Financed by Ukrainian Government.
2003-2004	Land Management Master Programme, Royal Institute of Technology (KTH), Stockholm, Sweden. Funded By Swedish Cooperation Development Agency (Sida).
2002-2003	Development of GIS-based tool for management of Boryspil Airport's Area, Institute Of geodesy and cartography, Kyiv, Ukraine. Financed by State Enterprise Boryspil International Airport.
2002	Harmonization of Standard ISO 19101 "Geographic Information/Geomatics-Reference Model", Institute of geodesy and cartography, Kyiv, Ukraine. Financed by Ukrainian Government.

Language skills

Swedish, English, Russian, Ukrainian.

Teaching experience

2010-2012	Technical Geology
2011-2013	Environmental Risk Assessment in Engineering
2015-2016	Water Contamination and Remediation
2015-2017	Risk Assessment and Decision Support in Engineering
2019-2021	Contaminated sites and remediation

Publications

Peer-reviewed papers

Chowdhury, S., Kain, J.-H., Adelfio, M., **Volchko, Y.**, Norrman, J. (2020). Greening the Browns: A Bio-Based Land Use Framework for Analysing the Potential of Urban Brownfields in an Urban Circular Economy. Sustainability 12 (15): 6278.

Volchko Y., Berggren Kleja, D., Back, P.-E., Tiberg, C., Enell, A., Larsson, M., Jones, C.M., Taylor, A., Viketoft , M., Åberg, A., Dahlberg, A.-K., Weiss, J., Wiberg, K, Rosén, L. (2020). Assessing costs and benefits of improved soil quality management in remediation projects: A study of an urban site contaminated with PAH and metals. Science of the Total Environment 707: 135582.

Norrman, J., Söderqvist, T., **Volchko, Y**., Back, P.-E., Bohgard, D., Ringshagen, E., Svensson, H., Englöv, P., Rosén, L. (2020). Enriching social and economic aspects in sustainability assessments of remediation strategies – Methods and implementation. Science of the Total Environment 707: 136021.

Volchko Y., Norrman, J., Ericsson, L.O., Nilsson, K.L., Markstedt, A., Öberg, M., Mossmark, F., Bobylev, N., Tengborg, P. (2020). Subsurface planning: Towards a common understanding of the subsurface as a multifunctional resource. Land Use Policy 90: 104316.

Volchko, Y., Norrman, J., Rosén, L., Karlfeldt Fedje, K. (2017). Cost-benefit analysis of copper recovery in remediation projects: A case study from Sweden. Science of the Total Environment 605–606: 300-314.

Norrman, J., **Volchko, Y.**, Hooimeijer, F. Maring, L., Kain, J.-H., Bardos, P., Broekx, S., Beames, A., Rosén, L. (2016). Integration of the subsurface and the surface sectors for a more holistic approach for sustainable redevelopment of urban brownfields, *Science of the Total Environment*, doi:10.1016/j.scitotenv.2016.02.097.

Rosén, L., Back, P.-E., Söderqvist, T., Norrman, J., Brinkhoff, P., Norberg, T., **Volchko, Y.**, Norin, M., Bergknut, M., Döberl, G. (2015). SCORE: A Novel Multi-Criteria Decision Analysis Approach to Assessing the Sustainability of Contaminated Land Remediation, *Science of the Total Environment* 511: 621–638.

Volchko, Y., Norrman, J., Rosén, L., Norberg, T. (2014). SF Box – a tool for evaluating the effects on soil functions in remediation projects, *Integrated Environmental Assessment and Management* 10 (4): 566–575.

Volchko, Y., Norrman, J., Rosén, L., Norberg, T. (2014). A minimum data set for evaluating the ecological soil functions in remediation projects, *Journal of Soils and Sediments* 14:1850–1860.

Volchko, Y., Norrman, J., Rosén, L., Bergknut, M., Josefsson, S., Söderqvist, T., Norberg, T., Wiberg, K., Tysklind, M. (2014). Using soil function evaluation in multi criteria decision analysis for sustainability appraisal of remediation alternatives. *Science of the Total Environment* 485–486: 785–791.

Volchko, Y., Norrman, J., Bergknut, M., Rosén, L., Söderqvist, T. (2013). Incorporating the Soil Function Concept into Sustainability Appraisal of Remediation Alternatives. Journal of Environ. Management 129: 367-376.

Lyastchenko, A., **Volchko, Y.**, Kravchenko I. (2012). Using fuzzy sets for GIS-based modeling of environmental factors and their impact on market value of land. Bulletin of Geodesy and Cartography, Kyiv, Ukraine, №3, 2012. p. 37-43. (*In Ukrainian*: Нечіткі геоінформаційні моделі прояву екологічних факторів та їх впливу на грошову оцінку земельних ділянок// Вісник Геодезії Та Картографії. – 2012. - №3. С. 37-43.)

Lyastchenko, A., **Volchko, Y.** (2010). Geoinformation models and methods for incorporating the influence of environmental factors into valuation of urban land. Town and Urban Land Planning, Kyiv, Ukraine. Vol.31, 2010. p. 63-73. (*In Ukrainian:* Геоінформаційні моделі та методи врахування впливу екологічних факторів на грошову оцінку земельних ділянок // Містобудування та територіальне планування : наук.-техн. зб. – К. : КНУБА, 2010. – Вип. 36. – С. 63 – 73.)

Volchko Y. (2008). The international approach to valuation of land affected by human activities. Town and Urban Land Planning, Kyiv, Ukraine. Vol.31, 2008. p. 54-60. (*In Ukrainian:* Правила міжнародної оціночної практики щодо врахування техногенної ситуації при грошовій оцінці земельних ділянок// Містобудування та терит. планув. - 2008. -Вип. 31. - С.54-60).

Volchko Y. (2008). The impact of manmade factors on market value of real estate. Engineering geodesy, Kyiv, Ukraine. Vol.54, p.42-50. (*In Ukrainian:* Аналіз впливу техногенних факторів на ринкову вартість нерухомості// Інженерна Геодезія, Київ, 2008 (Випуск 54). – С.42-50).

Volchko, Y. (2007). Classification of manmade environmental conditions and their impact on the real estate value in the context of the DC matrix. Modern Achievements of Geodesy Science and Production, Lviv, Ukraine. Vol.Ii, 2007. p.141-148. (*In Ukrainian:* Класифікація чинників навколишнього середовища техногенного походження та їх вплив на вартість об'єктів нерухомості в контексті DC-матриці// Сучасні досягнення геодезичної науки та виробництва, Lviv, Ukraine, 2007 (Ii Випуск). – С.141-148).

Peer-reviewed conference proceedings

Drenning, P., Norrman, J., Chowdhury, S., Rosén, L., **Volchko, Y.**, Andersson-Sköld, Y. (2020). Enhancing ecosystem services at urban brownfield sites – what value does contaminated soil have in the built environment? BEYOND2020 World Sustainable Built Environment Conference, June 9-11, 2020. Gothenburg, Sweden.

Volchko, Y., Karlfeldt Fedje, K., Norrman, J., Rosén, L. (2016). Cost-Benefit Analysis of Copper Recycling in Remediation Projects. Society for Risk Analysis Meeting in San Diego, USA, 11-15 December 2016.

Norrman, J., Söderqvist, T., **Volchko, Y.**, Rosén, L., Franzén, F. (2016). Implementation of a decision support tool for sustainable remediation in practice - Lessons learned. Society for Risk Analysis Meeting in San Diego, USA, 11-15 December 2016.

Rosén, L., Back, P-E., Norrman, J., Söderqvist, T., Norberg, T., **Volchko, Y.**, Brinkhoff, P., Norin, M., Bergknut, M., Döberl, G. (2013). SCORE: Multi-Criteria Analysis (MCA) for Sustainability Appraisal of Remedial Alternatives. In *Proceedings of the Second International Symposium on Bioremediation and Sustainable Environmental Technologies*, June 10-13, 2013; Jacksonville, Florida, USA.

Volchko, Y., Norrman, J., Rosén, L., Bergknut, M., Söderqvist, T., Norberg, T., Josefsson, S. (2013). Using soil function evaluation in multi criteria decision analysis for sustainability appraisal of remediation alternatives. In *Proceedings of the 12th International UFZ-Deltares Conference on Groundwater-Soil-Systems and Water Resource Management,* paper, poster presentation, Barcelona, Spain, April 16-19, 2013. Invited for publication in *Science of the Total Environment*.

Volchko, Y., Bergknut, M., Rosén, L., Norrman, J., Söderqvist, T., Norberg, T. (2012). Accounting for soil functions and services in sustainability appraisal of remediation alternatives. In *Proceedings of the 4th Joint Nordic Meting on Remediation of Contaminated Sites*, short paper, oral presentation, Oslo, Norway, September 18-21, 2012.

Norrman, J., **Volchko, Y.**, Rosén, L., Brinkhoff, P., Norin, M., Söderqvist, T., Kinell, G., Norberg, T. (2012). Development of a tool for evaluating the sustainability of remediation alternatives. In *Proceedings of the 16th Nordic Geotechnical Meeting*. Copenhagen, Denmark, May 9-12, 2012. Vol. 2/2, dgf-Bulletin 27, 793-800.

Peer-reviewed scientific reports

Norrman, J., Ericsson, L. O., Markstedt, A., **Volchko, Y.**, Nilsson, K. L, Sjöholm, J. (2020). Nya dimensioner i svensk planering – En utredning om undermarksplanering och geosystemtjänster. BeFo, Stockholm.

Back, P.-E., Enell, A., Fransson, M., Hermansson, S., Rosén, L., **Volchko, Y.**, Wiberg, K., Åberg, A. (2016). Markmiljöns skyddsvärde – En härledning med utgångspunkt i miljöetik och lagstiftning. Svenska geotekniska institutet, Linköping.

Volchko, Y., Rosén, L., Jones, C. M., Viketoft, M., Herrmann, A.M., Dahlin, A.S., Berggren Kleja, D. (2019). The updated version of SF Box: A method for soil quality classification as a basis for applicable site-specific environmental risk assessment of contaminated soils. Technical Note. Chalmers University of Technology: Gothenburg, Sweden.

Volchko, Y., Norrman, J., Rosén, L., Söderqvist, T., Franzén, F. (2016). Riskvärdering med SCORE-metoden för BT Kemi Södra området i Svalövs Kommun – Fallstudierapport. Repport 2016:18, ISSN 1652-9162, Chalmers Reproservice, Göteborg.176 s.

Rosén, L., Franzén, F., Norrman, J., Söderqvist, T., **Volchko, Y.** (2016). Riskvärdering med SCORE-metoden för Järpens industriområde i Åre kommun – Fallstudierapport. Repport 2016:17, ISSN 1652-9162, Chalmers Reproservice, Göteborg.130 s.

Back, P.-E., Enell, A., Fransson, M., Hermansson, S., Rosén, L., **Volchko, Y.**, Wiberg, K., Åberg, A. (2016). *Markmiljöns skyddsvärde - En härledning med utgångspunkt i miljöetik och lagstiftning* (in English: The protection value of the soil ecosystem). SIG publikation 27, Linköping. 46 s.

Norrman, J., **Volchko, Y.**, Maring, L., Hooimeijer, F., Broekx, S., Garção, R., Beames, A., Kain, J.-H., Ivarsson, M., Touchant, K. (2015). *BALANCE 4P: Balancing decisions for urban brownfield redevelopment. Technical report of the BALANCE 4P project of the SNOWMAN Network coordinated call IV.* Report 2015:11, ISSN 1652-9162, Chalmers Reproservice, Gothenburg, Sweden.131 p.

Norrman, J., Maring, L., Hooimeijer, F., Broekx, S., Garção, R., **Volchko, Y.**, Kain, J.-H., Ivarsson, M., Touchant, K., Beames, A. (2015). *BALANCE 4P: Balancing decisions for urban brownfield redevelopment – case studies. Case study report of the BALANCE 4P project of the SNOWMAN Network coordinated call IV.* Report 2015:12, ISSN 1652-9162, Chalmers Reproservice, Gothenburg, Sweden.124 p.

Volchko, Y., Rosén, L., Norrman, J., Bergknut, M., Döberl, G., Anderson, R., Tysklind, M., Müller-Grabherr, D. (2014). *SNOWMAN – MCA: Multi-criteria analysis of remediation alternatives to access their overall impact and cost/benefit, with focus on soil function (ecosystem services and goods) and sustainability. Final Report of the SNOWMAN-MCA project carried out as part of the SNOWMAN Network coordinated call II.* Report 2014:6, ISSN 1652-9162, Chalmers Reproservice, Gothenburg, Sweden. 77p.

Volchko, Y. (2013). *SF Box – A tool for evaluating ecological soil functions in remediation projects.* Report 2013:1, ISSN 1652-9162, Chalmers Reproservice, Gothenburg, Sweden.