YVON DESNOYERS | Senior Geostatistician

Expert in Radiological Characterization

✉ desnoyers@geovariances.com

✆ +33 1 6074 9090

in https://www.linkedin.com/in/yvondesnoyers/

LIST OF PUBLICATIONS

Last update: March 2023

PhD thesis

Desnoyers, Y. 2010. *Approche méthodologique pour la caractérisation géostatistique des contaminations radiologiques dans les installations nucléaires*. Thèse de Doctorat en Géostatistique, Mines ParisTech.

Contribution to collaborative reports, guides and standards

INSIDER H2020 Project: Improved nuclear site characterization for waste minimization in decommissioning and dismantling operations under constraint environment. https://insider-h2020.eu/results/#sampling_strategy

OECD/NEA - Working Party on Decommissioning and Dismantling (2017) Radiological Characterisation from a Waste and Materials End-State Perspective (www.oecd-nea.org/rwm/pubs/2017/7373-rad-char-pers.pdf)

ISO 18557:2017 Characterisation principles for soils, buildings and infrastructures contaminated by radionuclides for remediation purposes (www.iso.org/standard/62879.html)

CETAMA working group n°10 (2017) Évaluation de l'état radiologique initial et final d'une installation nucléaire en situation d'assainissement (CEA-R-6455 | ISSN 0429-3460)

EPRI (2016) Guidance for Using Geostatistics in Developing a Site Final Status Survey Program for Plant Decommissioning (www.epri.com/#/pages/product/3002007554/)

CETAMA working group n°10 (2014) Soil Radiological Characterization Methodology (CEA-R-6386 | ISSN 0429-3460)

OECD/NEA - Working Party on Decommissioning and Dismantling (2013) Radiological characterisation for decommissioning of nuclear installations (www.oecd-nea.org/rwm/docs/2013/rwm-wpdd2013-2.pdf)

Geovariances
Where no one has gone before

www.geovariances.com
✉ info@geovariances.com
✆ +33 1 6074 9090

Selection of refereed journals and conference proceedings

Desnoyers Y., Masoudi P., Joly P., Deneuvillers E. (2022) Metallographic characterization by variographic analysis and geostatistical simulation of local segregation microstructures in a heavy thickness forged part in SA508 Gr3 Cl2 type steel. In *Proc. of Fontevraud 10* conference, Avignon, France.

Boden S., Rogiers B., **Desnoyers Y.**, Pérot N., von Oertzen G., Sevbo O. and Demeyer S. (2021) STRATEGIST, a data analysis & sampling design web tool. In *Proc. of DEM2021 International Conference on Decommissioning Challenges*, Avignon, France.

Desnoyers Y., Pérot N. (2021) Robustness of statistical and geostatistical approaches for the radiological characterization of soils beneath a building. In *Proc. of DEM2021 International Conference on Decommissioning Challenges*, Avignon, France.

Desnoyers Y., Boden S., Rogiers B., Pérot N. (2019) H2020 INSIDER Project: Progress on sampling strategy and implementation on three use cases. Geostatistics perspectives for sampling optimization during radiological characterization. In *Proc. of 4th Canadian Conference on Nuclear Waste Management, Decommissioning and Environmental Restoration.* Ottawa, Canada

Desnoyers Y., Pérot N. (2019) Use case 3: Post accidental site remediation – CEA. In *Proc. of H2020 INSIDER Project Mid-Term* Workshop. Bilbao, Spain. EPJ Nuclear Sci. Technol. 6, 13 (2020)).

Desnoyers Y. (2018) Geostatistics perspectives for sampling optimization during radiological characterization. In *Proc. of DEM2018* conference, Avignon, France.

Desnoyers Y. (2018) Geostatistics cost-benefit analyses for classification of waste during initial radiological characterization. In *Proc. of DEM2018* conference, Avignon, France.

Demougeot-Renard H., **Desnoyers Y.** (2018) Prediction reliability of chemically contaminated volumes of soils. Feedback on 23 former industrial sites (RECORD study) and lessons learnt for radioactively contaminated sites. In *Proc. of DEM2018* conference, Avignon, France.

Desnoyers Y., Calonne O., Segond M., Binet H. (2018) Geostatistical carbon content mapping of EPR vessel heads using mobile spectrometer. In *Proc. of Fontevraud 9* Conference, Avignon, France.

Desnoyers Y., Da Costa M., Magnin M., Lerat V. (2017) Updated radiological inventory of G1 reactor thanks to a strengthened data processing. In *Proc. of Waste Management 2017* Conference, Phoenix, Arizona, USA.

Fichet P., Mougel C., **Desnoyers Y.,** Sardini P., Word H. (2017) New developments of autoradiography technique to improve alpha and beta measurements for decommissioning facilities. In *Proc. of Workshop on Current and Emerging Methods for Optimising Safety and Efficiency in Nuclear Decommissioning.* Halden, Norway.

Desnoyers Y. (2016) Geostatistics for radiological characterization: experience gained and perspectives. In *Proc. of 3rd Canadian Conference on Nuclear Waste Management, Decommissioning and Environmental Restoration.* Ottawa, Canada.

Faucheux C., **Desnoyers Y.**, Jefferies N., Teasdale I., Cruickshank J. (2015) Geostatistics improvements for Sellafield contaminated soils and groundwater modelling. In *Proc. of Global 2015*, Paris, France.

Chautru J.-M., **Desnoyers Y.**, Jefferies N., Jackson P., Teasdale I., Cruickshank J. (2015) Improvements with geostatistics for lithology representative fields and flow models at Sellafield site. In *Proc. of AquaConSoil 2015*, Copenhagen, Denmark.

Desnoyers Y., Dubot D. (2014) Characterization of radioactive contamination using geostatistics. *Nuclear Engineering International*. Volume 59, No. 716, March 2014, Pages 16-18. Sidcup, United Kingdom.

Lidar P., Larsson A., **Desnoyers Y.** (2014) Geostatistical characterisation of contaminated metals: methodology and illustrations. In *Proc. of Symposium on Recycling of Metals arising from Operation and Decommissioning of Nuclear Facilities,* Studsvik, Sweden.

Desnoyers Y., Dubot D. (2014) Importance des données pour les cartographies géostatistiques de contaminations radiologiques. Spectra ANALYSE n° 296 • Janvier - Février 2014

Pombet D., **Desnoyers Y.**, Aggarwal S., Charters G. (2013) Destructive testing: dry drilling operations with TruPro® system to collect samples in a powder form, from two hulls containing immobilized waste in a hydraulic binder. In *Proc. of ICEM* 2013 congress, Brussels, Belgium.

Bechler A., Romary T., Jeannée N., **Desnoyers Y.** (2013) Geostatistical sampling optimization of contaminated facilities. In *Stochastic Environmental Research and Risk Assessment*: Volume 27, Issue 8 (2013), Pages 1967-1974.

Himeur N., **Desnoyers Y.**, Dubot D. (2013) Sampling optimization for the characterization of a drum disposal legacy site. In *Proc. of DEM2013* congress, Avignon, France.

Desnoyers Y., Dubot D. (2012) Data analysis for radiological characterisation: Geostatistical and statistical complementarity. In *Proc. Of DD&R 2012 congress,* Chicago, USA.

Desnoyers Y., De Moura P. (2011) Characterization of a deep radiological contamination: integration of geostatistical processing and historical data. In *Proc. of ICEM 2011* congress, Reims, France.

Desnoyers Y., Dubot D. (2011) Geostatistical methodology for waste optimization of contaminated premises. In *Proc. of ICEM 2011* congress, Reims, France.

Desnoyers Y., Dubot D. (2011) Near real-time characterization of radio-contaminated soils in France: Challenges and Methods. In *Proc. of Conference on Waste Management, Decommissioning and Environmental Restoration for Canada's Nuclear Activities*, Toronto, Canada.

Desnoyers Y., Chilès J.-P., Dubot D., Jeannée N., and Idasiak J.-M. (2010), Geostatistics for radiological evaluation: study of structuring of extreme values. In *Stochastic Environmental Research and Risk Assessment*: Volume 25, Issue 8 (2011), Page 1031-1037 and in *Proc. of GeoENV 2010 congress*, Gent, Belgium.

Desnoyers Y., Chilès J.-P., Jeannée N., Lamadie F. and Dubot D. (2009), Geostatistical sampling optimization and waste characterization of contaminated premises. In *Proc. of Global 2009 congress*, Paris, France.

Jeannée N., **Desnoyers Y**., Lamadie F., Iooss B. (2008), Geostatistical sampling optimization of contaminated premises. Int. Conf. on Decommissioning Challenges: An Industrial Reality?. In *Proc. of Decommissioning Challenges > Industrial Reality and Prospects* congress, Avignon, France.

Oral communications during conferences

Desnoyers Y. (2022) Geostatistics to Help Optimize Subsurface Sample Design and Support Remedial and Final Status Survey Decision-Making on Several Case Studies. In *Proc. of NEA Workshop on Innovative Techniques and Technologies to Support Characterisation and Decommissioning of Complex and Legacy Sites*. Boulogne-Billancourt, France.

Desnoyers Y. (2022) Smart use of the variogram to explore spatial data, to break down variance contributions and to model radiological contaminations. In *Proc. of Workshop on statistical methods for safety and decommissioning*. Avignon, France.

Bourgeaux-Godet M., **Desnoyers Y.** (2022) Geostatistical mapping of two nuclear sites in Norway. In *Proc. of ICRER 2022 conference*. Oslo, Norway.

Desnoyers Y., Rogiers B. (2021) The STRATEGIST web tool: a guideline to implement a data analysis and sampling design strategy. In *Proc. of H2020 INSIDER Project Final* Workshop. Avignon, France.

Desnoyers Y., Rogiers B. (2019) Development of a user-friendly guideline for data analysis and sampling design strategy. In *Proc. of H2020 INSIDER Project Mid-Term* Workshop. Bilbao, Spain. EPJ Nuclear Sci. Technol. 6, 16 (2020).

Desnoyers Y. (2019) The use of statistics in environmental management. In *Proc. of IAEA technical Meeting on on Achieving the Site End State: Characterisation Strategies and Instrumentation for Land Contamination*. Dounreay, United Kingdom.

Marie S., Fichot P., Calonne O., Segond M., **Desnoyers Y.**, Hajjaj M., Miller C. (2018) Flamanville EPR RPV's Heads Carbon Segregation: Characterization of the Segregation in the Heads. In *Proc. of Pressure Vessels & Piping* Conference, Prague, Czech Republic.

Desnoyers Y. (2017) Geostatistics Perspectives for Sampling Optimization during Radiological Characterization. In *Proc. of 15th EPRI Int. NPP Decommissioning Workshop*, Lyon, France.

Lemarchand O., **Desnoyers Y.** (2016) Kartotrak, une solution logicielle intégrée pour la caractérisation radiologique. In *Proc. of 5e Forum européen de radioprotectique,* ATSR, La Grande Motte, France.

Cruickshank J., **Desnoyers Y.**, Faucheux C., Jefferies N., Teasdale I. (2016) Using geostatistics to improve understanding of contaminated land legacies – a case study at Sellafield. In *Proc. of International Conference on Advancing the Global Implementation of Decommissioning and Environmental Remediation Programmes*, IAEA, Madrid, Spain.

Desnoyers Y. (2016) Geostatistics for radiological characterization: overview and application cases. In *Proc. of International Symposium on Preparation for Decommissioning (PREDEC 2016)*. Lyon, France

Desnoyers Y. (2015) Sampling considerations for characterization of radioactive contamination using geostatistics. In *Proc. of World Conference on Sampling and Blending*, Bordeaux, France.

Geovariances
Where no one has gone before

www.geovariances.com
✉ info@geovariances.com
✆ +33 1 6074 9090

Desnoyers Y., Péraudin J.-J. (2015) Application of Geostatistics during Decommissioning of Nuclear Facilities. In *Proc. of 14th EPRI Int. NPP Decommissioning Workshop*, Manchester, United Kingdom.

Desnoyers Y., Dubot D. (2015) Why Use Geostatistics For Nuclear Decommissioning Projects?. In *Proc. of Waste Management 2015* Conference, Phoenix, Arizona, USA.

Juhel G., **Desnoyers Y.** (2014) Investigations et caracterisation de locaux avant démantèlement – Couplage d'un code de transport et d'un code de géostatistique. In *Proc. of Journées SFRP « Codes de calcul en radioprotection, radiophysique et dosimétrie »*, Paris, France.

Pombet D., **Desnoyers Y.**, Aggarwal S., Charters G. (2013) Destructive testing: dry drilling operations with TruPro® system to collect samples in a powder form, from a hull containing sludge immobilised in a hydraulic binder. In *Proc. of Decommissioning Challenges > Industrial Reality and Prospects* 2013 congress, Avignon, France.

Desnoyers Y., Dubot D. (2013) Radiological and physical characterization of accident damaged facilities in France. Presented at *International Experts´ Meeting on Decommissioning and Remediation after a Nuclear Accident,* IAEA, Vienna, Austria.

Desnoyers Y., Dubot D. (2012) Data analysis for radiological characterisation: Geostatistical and statistical complementarity. In *Proc. Of Workshop on Radiological Characterisation for Decommissioning*, Studsvik, Sweden.

Dubot D., **Desnoyers Y.**, de Moura P., Attiogbe J., Jeannée N., Péraudin J.-J. (2010) Characterization of radio-contaminated soils in France: challenges and outcomes. Presented at *Intersol'2010* conference, Paris, France.

Desnoyers Y. (2010) Evaluation de pollutions de structures de génie civil par les méthodes géostatistiques. Presented in *Séminaire CETAMA « Echantillonnage et caractérisation II »*, 27-29 avril 2010, Montpellier, France.

Desnoyers Y., Chilès J.-P., Dubot D., Jeannée N., and Idasiak J.-M. (2010), Geostatistics for radiological evaluation and risk analysis of contaminated premises. In *Proc. of DD&R 2010 congress*, Idaho Falls, USA.

Desnoyers Y., Chilès J.-P., Jeannée N., Idasiak J.-M., Dubot D. (2009), Geostatistical methods for radiological evaluation and risk analysis of contaminated premises. In *Proc. of International Symposium "Nuclear energy" - Sien 2009*, Bucharest.

De Moura P., Faure V., Attiogbe J., Dubot D., Jeannée N., **Desnoyers Y.** (2009), Cleansing methodology of sites and its applications. In *Proc. of International Sympopsium "Nuclear energy" - Sien 2009*, Bucharest.

Desnoyers Y., Attiogbe J., Crabol B., Dubot D. (2008), Optimisation des stratégies d'échantillonnage pour les caractérisations radiologiques de sites et sols pollués, 24ième congrès ATSR, Aix en Provence, France.

Posters during conferences

Moreno E., **Desnoyers Y.**, Bisel I., Marty P. (2023). Methodology for soil contamination estimation by a geostatistic-based method. In *Proc. of Waste Management 2023* Conference, Phoenix, Arizona, USA.

Eriksen T., **Desnoyers Y.** (2022) Geostatistical mapping of a contaminated riverbank in Norway. Poster presented during *ICRER 2022 Conference*, Oslo, Norway.

Desnoyers Y., Aspe F. (2022) Geostatistical deconvolution to find and locate punctual sources. Poster presented during *SRP Annual Conference 2022*, Llandudno, United Kingdom.

Desnoyers Y. (2022) Kartotrak, software solution for contaminated site and soil characterization. Poster presented during *SRP Annual Conference 2022*, Llandudno, United Kingdom.

Desnoyers Y. (2021) Kartotrak, solution logicielle intégrée pour la caractérisation des sites et sols contaminés. Poster presented during *Les ateliers de l'ATSR* conference, Cadarache, France.

Courtadon A., **Desnoyers Y.**, Dubot D., Granier G., Ollivier-Dehaye C., Roudil D. (2018) Cetama working group n°10 contributions on sampling and radiological characterization. Poster presented during *DEM2018* conference, Avignon, France.

Desnoyers Y. (2016) Geostatistics for radiological characterization: Sampling optimisation, data interpretation and risk analysis. Poster presented at *International Conference on Advancing the Global Implementation of Decommissioning and Environmental Remediation Programmes*, IAEA, Madrid, Spain.

Larsson A., Lidar P., **Desnoyers Y.** (2013) Integration of characterisation and categorisation in waste management to increase efficiency in clearance. Poster presented at *Release of Radioactive Materials Requirements for Exemption and Clearance 8th International Symposium TÜV NORD 8th International Symposium*, Hamburg, Germany

Attiogbe J., Dubot D., Jeannée N., **Desnoyers Y.** (2009), KARTOTRAK: a GIS platform for real-time characterization of radiological contaminations. Poster presented at *StatGIS 09 "GeoInformatics for Environmental Surveillance"*, Milos Island, Greece.