



FrankenSoils (1) - Soil contamination and remediation in an era of austerity and sustainability

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Short description of the lecture:

Borrowing the name from a European myth, “FrankenSoils” represents a team of interdisciplinary scientists and engineers who integrate remediation and restoration strategies to restore “life” and economic value to contaminated lands.

After more than 200 years of industrialisation, the European Economic Area faces an estimated 342,000 contaminated sites and further 2.5 million potentially contaminated sites, approximately 54% of which are hydrocarbon-impacted sites, across its membership countries. Industrialisation in Europe began before widespread availability of motor vehicles, so a substantial portion of the legacy of contaminated soils lies in close proximity to densely populated areas. Innovative, holistic, and cost-effective remediation strategies that encompass the full lifecycle of soil rehabilitation are essential to addressing Europe’s legacy of contaminated soils. The past thirty years has seen the development of a wide range of remediation processes have been developed for in situ (in place) and ex situ (excavated) remediation of contaminated soils. A wide range of site-and contaminant-specific factors affects the selection and implementation of remediation strategies. The past decade, in particular, has seen a substantial increase in the use of aggressive processes such as thermal and smouldering remediation that are capable of removing substantial amounts of contaminant rapidly from soil but may cause significant changes to the soil because of the high temperatures and aggressive chemical reactions taking place. This lecture series explores the issues of contaminated soils, remediation processes, and their impacts on the environment, integrating case studies and cutting-edge research throughout the series.

Contents:

1. Contaminants in the terrestrial environment and exposure assessment
2. Remediation processes and strategies for impacted soils
3. Frontiers in contaminant remediation
4. Physical and geochemical changes in soils after aggressive remediation



5. Case studies in contaminated soil remediation and post-remediation restoration

Terminy wykładów			
Data	Dzień tyg.	Godzina	Sala
2015-06-22	Pn	9.15-12.00	Hydro P1
2015-06-23	Wt	9.15-12.00	Hydro P1
2015-06-24	Śr	9.15-12.00	Hydro P1
2015-06-25	Cz	9.15-12.00	Hydro P1
2015-06-26	Pt	9.15-12.00	Hydro P1