

Seminars 2019



Dr. Bojan Batinić

Assistant Professor
in Waste Management,
University of Novi Sad (RS)

Cycle of Seminars

Day		Topic
Monday, 3 June 2019	<i>14:30-18:30 Room B.2.5</i>	<ul style="list-style-type: none">Technologies to treat electronic waste and recover precious metals and rare earth elements
Wednesday, 12 June 2019	<i>14:00-18:00 Room B.1.1</i>	<ul style="list-style-type: none">Artificial neural network as a appropriate method in solid waste management field
Thursday, 13 June 2019	<i>9:00-12:00 Room B.1.1</i>	<ul style="list-style-type: none">Appropriate technologies to recover and valorize special waste streams

Brief presentation of the seminars

Technologies to treat electronic waste and recover precious metals and rare earth elements

In the last years, the research interest has moved from the conventional recycling of WEEE (recovery of ferrous and non-ferrous metals, plastic, glass and other “mass relevant” fractions), to the innovational recycling, aimed to recover trace elements, such as critical metals (CMs) and rare earth metals (REMs). Through this seminar, an overview of the most relevant e-waste categories and products in terms of CMs and REMs presence, a description of currently applied pre-treatment methods and fate of the observed group of metals during pre-processing phase, as well as general recommendation in order to avoid losses of CMs and REMs within the WEEE treatment chain, will be addressed.

Artificial neural network as a appropriate method in solid waste management field

The classical methods in order to determine the existence and strength of relation between variables include regression and state space methods. Modern methods include expert systems, fuzzy systems, evolutionary programming, artificial neural networks (ANN) and various combinations of these tools. In waste management, among the many existing tools, the ANN has received much attention because it can be effectively applied in domain of prediction, clustering, classification, etc., and because of its clear model, easy implementation and good performances. Within seminar, model for forecasting the amounts of packaging and biodegradable municipal waste will be elaborated.

Appropriate technologies to recover and valorize special waste streams

Special waste stream such as: batteries and accumulators, electronic and electrical waste, end-of-life vehicles, waste tires, waste oils, construction and demolition waste, etc. are composed of potentially hazardous substances, but also valuable secondary raw materials, which requires different solutions in comparison to conventional waste streams. Management of the specific waste streams in terms of collection, transport and the corresponding options for the treatment, respecting current legislation and using currently available technologies will be analyzed through the seminar.

Brief presentation of Dr. Bojan Batinić

Bojan Batinić (1981) is Assistant Professor at the University of Novi Sad (Serbia) - Faculty of Technical Sciences - Department of environmental engineering. His field of research is designing and development of waste management systems. His key research areas are: waste amount and composition analysis, modelling and projection of future waste characteristics, possibilities for utilization of different waste materials, waste collection, transportation and transfer analysis, design and development of waste management systems in line with EU Directives, local and regional waste management planning, Environmental Risk Assessment, etc. He is author and co-author of over 40 scientific papers related to topic of solid waste management, published in SCI Journals and International conferences. In previous professional work he was engaged in more than 30 national and international projects in the field of environmental protection and waste management.