

Summary Meeting and Workshop

**ERASMUS MUNDUS FOR THE COMMUNITY**

UNIVERSITY OF WARSAW, 27-28 April 2017

PRESENTATIONS  
BY EMA2 SCHOLARSHIP HOLDERS

ABSTRACTS



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## SESSION 1: HUMAN AND THE ENVIRONMENT

### **Presenter 1: Ms. Adish Khezri**

EMA2 project: SALAM

Home institution: KNTUT

Receiving university: University of Twente, ITC

Academic area: Urban and Regional Planning (PGM)

Research topic: Mountain-SDI for Integrated Land Administration and Adaptation to Climate Change

### **Title of the presentation: Mountain Community Adaptive System**

#### Abstract

12% of the world's population are the mountain people. They live on land and use it to farm, raise livestock and provide a shelter for their families. Many of them do not have access to land and climate information that would help them to manage their land and resources in a sustainable manner. It is often the case that they are not able to settle their livelihood in secured, safe and healthy places. Currently, Land Administration System (LAS) as a potential tool deals with issues of land tenure security by registering land rights, land value stimulating land markets, and land use for land development activities. Knowledge, concepts and tools are still required on how LAS deals with the land tenure security in the combination of land rights relating to the carbon footprints in the mountain areas for adaptation to climate change so that mountain people are resilient to climate change, and located in appropriate shelters for sustainable living. As improved spatial information is required by the stakeholders at all levels of institutions, it is important to understand the exact needs and services of the stakeholders at the different levels of the SDI hierarchy and scale. It is also needed to have an interoperable environment for better access and use of various geo-data concerning topography, land tenure, environment including climate change prediction and socio-economic data. Since the role of SDI is highly critical to facilitate positive societal effects, and experiences are available on developing and using SDI from technological perspectives, this research aims at strengthening SDI to contribute to integrating land administration and adaptation to climate change to support the mountain communities. The goal is to develop a so-called 'Mountain-SDI' with advanced Geo-information and communication technologies (Geo-ICT).

### **Presenter 2: Ms. Yasmin Afsharhotli**

EMA2 project: SALAM 2

Home institution: University of Mazandaran

Receiving University: University of Twente, ITC

Academic area: Urban Planning and Management

Research topic: Neighbourhood Deprivation in Enschede- Application of geo-tagged social media indicator

**Title of the presentation: Neighbourhood Deprivation Assessment-Application of geo-tagged social media indicator**

Abstract

The importance of Multiple Deprivation has raised significantly in Europe since 2010. ‘Europe 20120 Strategy’ is a framework that points the social inclusion as a target and states that social inclusion should be promoted through poverty reduction by people who are exposed to the risk of poverty (The European Union, 2012). The Index of Multiple Deprivation tries to describe the socioeconomic composition of resident’s condition in a particular spatial unit such as census divisions (Meijer, Engholm, Gritter, & Bloomfield, 2013). Therefore, different indices of deprivation such as ‘The English Indices of Deprivation’ have executed for the purpose of poverty measurement in Europe.

This research develops a social economic and physical deprivation index, which was adapted from previous frameworks to quantify deprivation in Enschede City at Neighbourhood scale. Based on Mputa Wekisa (2014) a geo-tagged social media indicator is built and further studies are conducted to seek the relationship between social media indicator and deprivation level in the Enschede’s neighbourhoods. To this, a quantitative geo-tagged social media indicator based on Instagram data was constructed. The Factor Analysis categorizes this indicator as a physical indicator. Further, the content of the photo’s captions extracted from Instagram was examined with Word Clouds analysis method. In this method, the frequency of positive and negative words in the captions have been evaluated. The geo-visualization for the social economic dimension of Enschede deprivation shows that rural areas of Enschede have lower social economic deprivation. Also, analysing the individual indices shows that in deprived neighbourhoods, the percentage of inactive people and people with non-western origin are usually higher. Moreover, the spatial pattern revealed from geo-visualization of physical deprivation shows that neighbourhoods located within built-up areas have a lower deprivation. The more distance from the City Centre causes the more physical deprivation. Final results showed that at 5% significance level, the final index of social economic deprivation is associated reversely with the final index of physical deprivation, however, the correlation is not strong.

**Presenter 3: Ms. Golnaz Asghari Ezzati**

EMA2 project: SALAM

Receiving university: University of Twente, ITC - Faculty of Geo-Information Science and Earth Observation

Academic area: Natural Resource Management (Environmental Engineering) & Geoinformation Sciences and Earth Observation

Research topic: Natural resource conservation, mitigation of environmental pollution resulting from agricultural activities

**Title of the presentation: Natural resource management and sustainable contaminant remediation of agricultural farms**

## Abstract

The EM A2-SALAM project provided me with the opportunity of learning how to employ remote sensing tools in ensuring proper management and monitoring of ecosystem biodiversity in national scale (monitoring Hyrcanian Forest published as a conference paper) and in international scale (utilization of high resolution imagery for species distribution modeling in Rhodopes Mountain).

My multi-disciplinary studies and research activities, including MSs EM2, made me realized that the wide range of GIS applicability in natural resource management was not only limited to biodiversity conservation and ecology, but it could also be employed to address soil contamination and water pollution associated with agricultural intensification.

Now as an early stage researcher involved in a Marie Curie (INSPIRATION) project, my research results will contribute to mitigation of contaminants associated with agricultural-intensification and to manage serious threats to natural resources as a result of fast-paced population growth and increased food production. I plan to incorporate GIS and programming skills, the knowledge that I gained through EM2, into soil and water quality data in order to detect nutrient losses in an agricultural landscape, locate potentially contaminated sites and pollution diffusion sources, map areas with natural attenuation capacity against excess nutrient losses, and mitigate the adverse effects of intensive farming in both European and global contexts.

My scientific research outcomes promote sustainable agricultural intensification and ultimately benefit agricultural wastewater treatment industry economically, socially and environmentally with the help of state-of-the-art technologies.

### **Presenter 4: Mr. Milan Stojanovic**

EM A2 project: SIGMA

Home institution: Department of Food Technology and Biochemistry, Faculty of Agriculture, University of Belgrade

Receiving university and unit (faculty, institute, etc.): Department of Food, Environmental and Nutritional Sciences, Faculty of Agriculture, University of Milan

Academic area: Food Science (Food Technology)

Research topic: Reusing of winemaking by-products and development of potential food ingredients

**Title of the presentation: Processing of grape skins recovered from winemaking into fiber- and phenolic- rich micronized ingredients for functional foods**

## Abstract

The world population is increasing drastically, demanding more food productivity with enhanced

quality. At the same time, there is a global trend of increasing consumers' interest in functional food and food enriched with natural bioactive compounds and nutraceuticals. Taking into account, the fact that the processing of raw material in industries leads to the accumulation of huge amounts of by-products, which are still rich in useful compounds, these by-products should be considered as 'the resources' rather than 'the wastes'. Since the prevention is not always feasible, implementation of waste management, in the context of Sustainable production, in food industry is needed.

The aim of this research was to develop micronized food ingredients from fermented grape skins (GS) recovered from winemaking by-products. Liquid GS dispersions (containing either 2 or 10% of dry solids) were produced by blanching (1 - 4 min at 100 °C), dilution in 8 mM potassium citrate buffer pH 3.0, homogenization and pasteurization (8 min at 100 °C, to achieve 6 decimal reductions of the target microorganism *Alicyclobacillus acidoterrestris*). GS powders were obtained by air-drying (50 - 55 °C for 3.5 h) and grinding. The effects of processing were analyzed by measuring total phenolic content (Folin Ciocalteu assay), proanthocyanidin content (n-butanol/HCl assay), individual phenolics (HPLC) and *in vitro* ferric ion reducing capacity (FRAP). Freeze-dried GS were used as a reference to calculate antioxidant recovery. Production of liquid GS dispersions allowed shortening the processing time, with recovery of antioxidants and FRAP values > 60%, except for proanthocyanidins. Air-drying led to higher recovery values (> 70%). Liquid and dried GS products displayed different water binding capacity and sedimentation behavior. The advantages of using either liquid or dried GS based food ingredients were discussed.

## SESSION 2: HUMAN AND TECHNOLOGY

### Presenter 1: Ms. Flogerta Banaj

EMA2 project: Basileus IV

Receiving university and unit: Lund University

School of Economics and Management, Department of Informatics

Academic area: M.Sc. Information Systems

Research topic: Finding the potential privacy gap in the Big Data Supply Chain

### Title of the presentation: What is the potential privacy gap in the Big Data Supply Chain?

#### Abstract

We live in a digitalized society. All the abundant data we produce, today called "Big Data", is changing our lives and will soon disrupt it. Different studies and analysis argue about the advantages that Big Data comes in, not only as a competitive advantages for the data holders, but also in health, government, for the citizens and society as a whole. Nevertheless, Big Data comes with significant questions and poses challenges toward the privacy concern. So the path to Big Data gains is risky and also rocky. The

decision we take over that data has real human consequences such as ethical issues. Any data on social subjects raises privacy issues, and when the risk of misuse, intentionally or not, is huge it becomes an issue for the entire information society. In this research, we explore potential gaps among the participants and deduct various reasons of these breaches reaching therefore to reasons for improving the interplay among them. The study reflects on the interplay between government, business and consumer in a Big Data Supply Chain. It shows an existing inconsistency partly because of the lack of enforcement government legacy that is also attributed to lack of educated public.

Data holders lack transparency, and consumers retain their trust toward them. The communication, barriers and legal rights between their interplay are vague, leading so to an important question toward ownership. When data sets are available to be gathered and used in analysis, there is a mist about its usage rights and requirements.

**Presenter 2: Ms. Sanaz Asgarifar**

EMA2 project: SALAM

Receiving university: University of Algarve, Faculty of Science and Technology

Academic area: Electronic Engineering and Telecommunications

Research topic: Bioelectronics

**Title of the proposed presentation: Implantable electronic devices for advanced therapies**

Abstract

Understanding how neurons produce our thoughts, perceptions, and actions is one of the greatest challenges of science. Disruption of neuronal signalling activity gives rise to neurological and psychiatric disorders. Brain-related illnesses affect more than two billion people worldwide. Advances in treatments for brain disorders have until now relied largely upon a pharmaceutical approach. However, the development of drugs that do not have intolerable side effects is becoming extremely complex and difficult. It is now believed that an electronic engineering-driven approach is needed, to develop solutions based on electrical signals. This is supported by a number of progresses in electronic transducers working as prosthetic and electroceutical devices. These are devices that aim to establish an electrical and chemical bidirectional communication interface with cells and tissues. These devices measure the signals so that researchers can unveil and develop a code of patterns associated with health and disease states. Once the signals are decoded, devices can also generate the correct signal patterns to modulate the neural impulses controlling the body, repair lost function and restore health.

The objective is to develop a multifunctional implantable electronic transducer to record and stimulate signals from/to neuronal cells. These devices should work as a tool to decode communication signals used by cells to regulate biological functions and are also aimed to repair faulty signalling pathways acting as therapeutically biomedical devices.

The transducer will be optimized and tested with an important class of neural cells, the glial cells. Improper signalling by these cells is responsible for a number of neuronal diseases such as Parkinson and Alzheimer. The entire transducer will be developed in the laboratory using cultured cells but using technology and materials suitable to be implantable.

**Presenter 3: Mr. Aljoša Jankov**

EMA2 project: SIGMA *Agile*

Home institution: Faculty of technical sciences in Novi Sad, University of Novi Sad

Receiving university: Lappeenranta University of Technology (LUT)

Academic area: Finance, Economy, Technology, Entrepreneurship.

Research topic: The prospects of Bitcoin as a driver of economic changes

**Title of the presentation: How cryptocurrencies and blockchain could improve the world**

Abstract

This presentation would aim to describe in simple words what is Bitcoin - where does it stand today as a currency system, to explain it as a brand phenomenon that generates cult-like followers, and to point out how cryptocurrencies could improve human lives on a daily basis.

Cryptocurrencies by their own nature provide the ability to reach countries that are excluded from the traditional financial system, therefore allowing certain international trade operations to happen in the first place (e.g. shipping electronic equipment to Pakistan and Moldova). They also mean cheaper and faster transactions, and an increased privacy when compared to the traditional fiat currency system. The core technology that cryptocurrencies use - the blockchain solely has already been enabling new types of business models. The flexibility of cryptocurrencies and blockchain gives them a great potential to grow into something much bigger in the future.

The specific value of the research would be presented by proposing own ideas for using the cryptocurrencies in order to: 1. Resolve the problem of gray market activities in 20 countries within Europe and Asia; 2. Boost the development of Industrial IoT (the highly anticipated second round of internet revolution); 3. Create a completely new business model and strategy for selling rare, collectible and high-end luxury commodities (based on the scarcity principle);

Overall, the presentation would offer a glimpse into the future by giving credible insights into the development of technology, and point out how Erasmus was an eye-opening experience for me in that matter, that guided my future career decisions. I would conclude by enlisting 7 developing fields, that I would recommend as great investments for anybody to get familiar with, or base a business upon. All of which I firstly encountered during my Erasmus exchange period.



### SESSION 3: HUMAN AND SOCIETY

**Presenter 1: Mr. Bujar Aruqaj**

EMA2 project: SIGMA Agile

Home institution: University of Prishtina, Kosovo

Receiving university: Berlin Graduate School of Social Sciences - Institut für Sozialwissenschaften, Humboldt Universität zu Berlin

Academic area: Sociology and Social Psychology

Research topic: Social Cohesion and its Implications on Human Well-being

**Title of the presentation: Social Cohesion and its Implications on Human Well-being: Conceptualization, Theoretical Implications and Empirical Evidence**

Abstract

The paper connects the concepts of social cohesion and human development as defined under the capability approach. In the first section, I review the literature present in sociology, social psychology, and development studies used to explain social cohesion and propose a new ‘consensus’ definition that extends along previous ones. The stand that social cohesion in a society can essentially only be measured through subjective or perception-based indicators is supported and operationalized in this paper. In the second section, I propose a theoretical framework to explore the conducive effects of social cohesion on human capabilities. Not only does social cohesion act as a so-called collective ‘opportunity structure’, it also fosters the expansion of ‘group-depend’ or ‘social-capabilities’ that individuals alone would neither have nor be able to achieve. Finally, using statistical methods, I present some empirical findings to infer the link between social cohesion and individual ‘functionings’. This paper rationalizes the development of a ‘Social Cohesion’ Index which is an equally weighted sum of ‘Generalized Trust’, ‘Civic Identity’, and ‘Perceived Fairness’. In the sample of 22 European societies, I find a robust association between levels of the Social Cohesion Index (SCI) with the human development index (HDI) as well as subjective well-being (SWB) indicators in these societies. Further, I find a significant association between perception of trust in others by group and trust in institutions in the one hand, and attitudes towards foreigners (i.e., “respect for diversity”) on the other. I find that in more cohesive societies individuals feel overall more satisfied and happier with their life. Further, I find that the lack of trusts in institutions and in others threatens cohesion and leads to negative attitudes towards foreigners (focus here on Great Britain, Austria and Hungary). The analysis is both theoretical and empirical. The theoretical analysis claims that cohesion has an intrinsic and instrumental value to human development, whereas the empirical analysis uses measurement models, regressions, scatter plots and different graphs to illustrate the findings. The paper uses extensive citations and adds value in terms of analytical substance, logical content, normative insight and practical operational significance to the field of social sciences. It can also help us understand and interpret some recent political development in Europe.

**Presenter 2: Mr. Esheref Haxhiu**

EMA2 project: Sigma Agile

Home institution: The University of Pristina

Receiving university: The University of Warsaw, Faculty of Psychology

Academic area: Psychology

Research topic: as below

**Title of the presentation: The phenomena of loneliness and its impact on general health among Kosovo war veterans**

Abstract

The data indicates that the phenomenon of loneliness is widely present among people nowadays. Loneliness affects war veterans as well. These veterans have been going through some difficult situations in the area of war, so after the homecoming period they feel like the others around them do not understand them. Further, many research claim that loneliness is highly associated with other psychological and physical problems as well. Therefore the aim of this study was to measure the level of loneliness among combat veterans of Kosovo war (1998-1999) as well as to see if high scoring in loneliness predicts high scoring in general psychological distress and physical symptoms. Furthermore, we tried to identify if there are categories among veterans in Kosovo, like are those unemployed, wounded, or imprisoned that might have higher level of loneliness and worse health conditions in general. This was a quantitative study which utilized four self-reported measures to examine the above mentioned variables. As a sample were used 170 war veterans of Kosovo Liberty Army (KLA), who fought with Serbian (former Yugoslavian) army during the period 1988-1999. Results revealed high level of loneliness prevalence among these veterans. Furthermore, it was proved that loneliness predicts high level of other psychological and physical problems. The results of this study can be used for further community intervention projects, which would work to reduce the level of loneliness among veterans as well as other psychological and physical problems.

**Presenter 3: Mr. Yunes Sadat Fakhr**

EMA2 project: SALAM2

Home institution: University of Tehran

Receiving university: Erasmus Mundus Programme Euroculture, Georg-August-Universität Göttingen

Academic area: EU studies, Political Science, International Relations, Sociology

Research topic: Roots and Mechanisms of Fundamentalism Among the European Muslim Minority

**Title of the presentation: European Muslims; Perspectives of a “Political” Radicalism**

Abstract

It has been long noticed that a tendency toward Violent Islamist Fundamentalism is significantly more prevalent among European-born Muslims, comparing to First-generation Immigrants from Muslim countries.

This phenomenon, indeed, has been largely studied as a “European Problem” in the aftermath of attacks in Brussels, Paris, Berlin, and elsewhere. There is a consensus among scholars to study these violent tendencies within a context of systematic racism against Muslim-majority nationals (Turks, Moroccans, etc.), social inequality, and marginalization, all of which feed to a sense of resentment and anger.

In the past, issues such as poverty, oppression, and inequality often resulted in different forms of political mobilization. Ranging from strikes and civil disobedience, to revolutions, and riots. Islamist Extremism seems to be in comparison, a much younger phenomenon, dating back to cold-war era, and “Flourished” after that, posing as the only militant adversary to a globally-despised American unilateral dominance.

Following this background, my research question is that why, and how those socio-economic issues (poverty, discrimination, etc.) lead some members of Muslim diaspora toward Islamist Extremism, instead of other forms of political mobilization, such as forming political parties, or organizing civil protests?

In order to better understand the reasons and mechanisms of Extremism, I have explored recruiting tactics employed by Islamist groups. As well as counter-radicalization programmes by governments, or NGOs.

On the other hand I have also studied examples of grass-root political movements concerning the same issues (racism, discrimination, unemployment, etc.) within Immigrant communities, to identify obstacles for such political formations in local Muslim communities.