

II. International conference  
INTERACTION OF SCIENCE AND  
ECONOMY - IN JAPAN AND CROATIA

**SUSTAINABLE  
DEVELOPMENT  
TODAY**

# Book of Abstracts



Osijek –  
Vinkovci  
17<sup>th</sup>-19<sup>th</sup>  
September  
2018



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INTERACTION OF SCIENCE AND  
ECONOMY - IN JAPAN AND CROATIA**

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**Osijek, 2018.**

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- Financial Services Industry Under the Rapid Penetration of Fintech  
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- Agricultural Equipment Cluster Ltd. - Osijek  
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#### INFORMATION ON ORGANIZERS

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- Panon, think tank for strategic studies - Osijek
- Competence Centre Ltd. - Vinkovci
- GEOprem Ltd. - Osijek
- Croatian forests Ltd. - Vinkovci
- Kopački Rit Nature Park - Kopačevo
- Wood Cluster „Slavonian Oak“ - Vinkovci
- Spačva d.d. - Vinkovci
- Vukovar Srijem County - Vukovar



# INTRODUCTION

## BACKGROUND

Collaboration of Osijek scholars with colleagues from Wakayama (Japan) began with a study visit by Vedran Mesaric, member of the Panon think tank, in Japan in 2015. At the end of 2016, prof. Arata Uemura stayed in Osijek and held a lecture at the Croatian Chamber of Economy on Employment Policy in Japan. Next year, Wakayama University hosted the first scientific conference of Croatian and Japanese scientists on the topic of "Education and Training as Basis for Future Employment" – after which a document on cooperation between Wakayama University and Osijek University was also signed.

The second conference of Croatian and Japanese scientists is held this year in Vinkovci and Osijek on topic of Sustainable Development Today - Interaction of science and economy in Japan and Croatia.

## PURPOSE OF CONFERENCE

Analysis of models and examples of good practice of interaction between science and economics in Japan and Croatia contributing to achieving sustainable development today.

These professional and scientific contributions should provide frameworks for future cooperation between scientific institutions and business entities from both countries.



# ORGANIZER INFORMATION

## CONFERENCE ORGANIZER

- PANON - think tank for strategic studies  
Osijek (Croatia)  
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Phone: +385 (0)31 204-074  
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## CONFERENCE CO-ORGANIZERS

- Competence Centre Ltd. For research and development,  
Vinkovci (Croatia)
- Cultural and Scientific Center Milutin Milanković  
Dalj (Croatia)
- GEOprem Ltd.  
Osijek (Croatia)
- Nature Park Kopački rit  
Kopačevo (Croatia)
- Unit for Economic History and Management History Research  
Wakayama University (Japan)
- Vukovar-Srijem County  
Vukovar (Croatia)
- Wood Cluster Slavonian Oak  
Vinkovci (Croatia)

## SPONSORS OF CONFERENCE

- Croatian Forests Ltd.  
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- Spačva d.d.  
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Prof. dr. sc. **Suguru Yanata**  
Faculty of Economics, Wakayama University

## **CONFERENCE MODERATOR**

Mr. sc. **Željko Erkapić** - Agricultural Equipment Cluster Ltd. - Osijek

## **ORGANIZING COMMITTEE**

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**Vlatko Rožac**, prof.  
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**Vedran Stojnović**, mag. ing.  
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Panon institut Osijek

Mr. sc. **Držislav Vidaković**  
Faculty of Civil Engineering Osijek & member of Panon institut Osijek

## TIME TABLE

**2018 September**

DATE	HOUR	PLACE	ACTIVITY
<b>16<sup>th</sup></b>	19:00 - 20:00	Kunjevci	Welcome party
<b>17<sup>th</sup></b>	8:00 - 8:30	„	Registration of participants
	8:30 - 9:00	„	Opening of conference
	9:00 - 12:00	<b>Conference hall</b>	First session
LEGAL, ECONOMIC, SOCIAL AND ECOLOGICAL ISSUES OF SUSTAINABLE DEVELOPMENT IN JAPAN AND CROATIA - Sustainable development of forestry and wood industry in Vukovar-Srijem County -			
	9:00 - 9:15	Ivan Ambroš	Role of Regional Government in Sustainable Development of Forestry and Wood Industry
	9:15 - 9:30	Ivan Ambroš, Josip Faletar et al	Cascading Use of Wood: Case Study of Spačva
	9:30 – 10:00	Uemura Arata	Long Hour Working in Japan – Threat to Sustainability of Japanese Society - Invited lecture -
	10:00 - 10:15	Zdenko Samaržija Renata Trischler	Civic tradition as Essential Element of Sustainable Development of Baranja, Slavonia and Srijem
	10:15 - 10:30	Kitagawa Kota	Sustainability of a Business System beyond a Firm
	10:30 - 10:45	Coffee break	

	10:45 - 11:00	Atila Čokolić, Vedran Mesarić	Sustainability of the Attorney Profession - a Case Study: Croatia
	11:00 - 11:15	Shiomi Takuya	Resolution systems of Labor - Related Disputes in Japan
	11:15 - 11:30	Milan Ivanović Držislav Vidaković	The Role of Think Tanks in Modeling Sustainable Development Policy
	11:30 - 11:45	Yanata Kaori	Sustainable Tourism Development of Spiritual Tourism: a Case Study of a Buddhist Sacred Site, Koyasan in Japan
	12:00 - 15:00	Visit to forestry/wood industry location in Vukovar-Srijem County	
	15:00 - 17:00	Lunch	
	17:00 - 18:00	Return to Osijek	
	18:00 - 20:00	Guest accommodation	
<b>18<sup>th</sup></b>	8:00 - 9:00	<b>GEOPrem - Osijek</b>	Registration of participants
	9:00 - 12:00	„	Second session
<b>TECHNOLOGICAL QUESTIONS OF SUSTAINABLE DEVELOPMENT IN JAPAN AND CROATIA</b>			
	9:00 - 9:30	Hrvoje Glavaš	Sustainable Energy Performance Improvements in Industry with Implementation of ISO 50001 Energy Management System  - Invited lecture -

	9:30 - 9:45	Nomakuchi Takao	A Study about Sustainability of Regional Industry Based on Dynamic Capability
	9:45 – 10:00	Željko Erkić	Agricultural Equipment Cluster Ltd. - Osijek
	9:45 - 10:00	Tomislav Keser Vedran Stojnović	Development of Optical Networks - the Foundation of Sustainable Development in Slavonia Region
	10:00 - 10:15	Suguru Yanata	Financial Services Industry Under the Rapid Penetration of Fintech
	10:15 - 10:30	Lara Liović	Construction and maintenance of the facility for pickling cabbage Čepinski
	10:30 - 10:45	Lidija Ambroš Tihomir Moslavac	"BB OIL" Ltd. in Function of Ecological Oil Production and Fostering Local Community development
	10:45 - 11:30	Tasting organic products of the company "BB OIL"	
	11:30 - 16:00	Free afternoon	
	16:00 - 16:30	Travel to Dalj	
	17:00 - 18:30	<b>Cultural and Scientific Center Milutin Milanković - Dalj</b>	Round table
	CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT		
	17:00 - 17:15	Đorđe Nešić	Cultural and Scientific Center Milutin Milanković - Dalj

	17:15 - 17:30	Milan Ivanović	Scientific Contributions of Milutin Milanković (1879–1958) to Climate Theory
	17:30 - 17:45	Dalibor Mesarić	Open Source Platforms for Education
	17:45 - 18:15	Visiting Milutin Milankovic museum	
	18:15 - 20:00	Cocktail	
	20:00	Return to Osijek	
<b>19<sup>th</sup></b>	8:30 - 9:00	Travel to Nature park Kopački rit	
		<b>Nature park Kopački rit</b>	
	8:30 - 9:00	„	Registration of participants
	9:00 - 12:00	„	Third session
	<b>DEMINING - A MAJOR QUESTION OF SUSTAINABLE DEVELOPMENT IN CROATIA</b>		
	9:00 - 9:15	Damir Jelenić Franjo Ambroš et al	Mine Action in Croatia – Overview of Eastern Croatia
	9:15 - 9:30	Vlatko Rožac Sonja Kučera et al	Kopački Rit Nature Park Sustainable Management in the after War Period
		Vjekoslav Majetić Davor Krpan	DOK-ING, Robotic Mine Clearance and Firefighting Systems - posters

	9:30 - 10:30		Round table
	SCIENCE AND ECONOMY IN FUNCTION OF SUSTAINABLE DEVELOPMENT IN JAPAN AND CROATIA		
		Vedran Mesarić	Moderator
	9:30 - 9:40 9:40 - 9:50 9:50 -10:00 10:00 -10:10	Ivan Ambroš Željko Erkapić Nomakuchi Takao Suguru Yanata	Panelists
	10:10 -10:20	Milan Ivanović	Conclusions of the conference
	10:20 -10:50	Coffee break	
	11:00 -12:30	Visit to Nature park Kopački rit (Boat ride)	
	13:00 - 14:00	Return to Osijek	
	16:00 – 19:00	Afternoon sports	
<b>20<sup>th</sup></b>	9:00	Departure of the conference participants from Osijek	

# **ABSTRACTS**



## **Second session**

### ***TECHNOLOGICAL QUESTIONS OF SUSTAINABLE DEVELOPMENT IN JAPAN AND CROATIA***

# Development of Optical Networks - the Foundation of Sustainable Development in Slavonia Region

Tomislav Keser\* Vedran Stojnović\*\*

## Abstract

Today, construction of telecommunication infrastructure for broadband access has the same effect as construction of railway and power infrastructure had about 100 years ago. This is recognized at EU level, and the European Parliament brought EU Broadband Cost Reduction Directive 2014/61/EU to emphasize the importance of access to high-speed broadband. Directive defines the deadlines for meeting certain bandwidth at EU level. At regional level in the 5 counties area (Slavonia) the project "Slavonian Network" was launched in 2013 with the aim of elaborating conceptual plan (and subsequent implementation plan) for increasing the availability of broadband Internet by 75% of the local population.

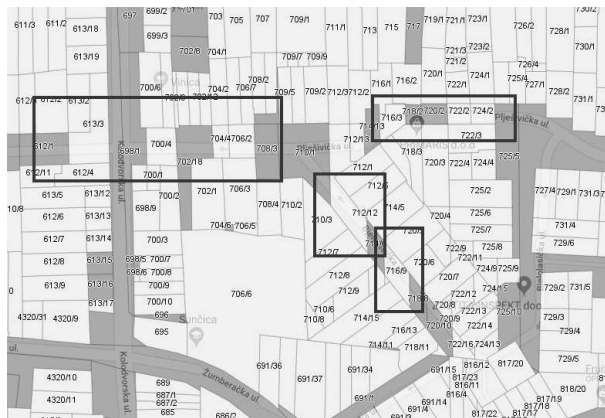


Fig 1

The project also includes multidisciplinary analysis of potential problems that arise in the implementation of such a project. It was estimated that the availability of quality infrastructure could enable GDP growth for the region, based on the: more efficient public administration, better business performance, better quality of life and other new applications. Through the project, education of local communities was carried out and papers were published to encourage the provision of EU grants. For a more effective implementation of the

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project, the founding of a consortium between counties, private companies, faculties and the PANON think tank was proposed. Subsequently, the company "Slavonska mreža" Ltd. was founded, whose founders were 5 counties in Slavonia and University of Josip Juraj Strossmayer in Osijek. After initial successful development of the conceptual project, tendency of growth in project implementation was significantly slowed due to the difficulties in implementation: problems with unresolved property legal relations, insufficient education of the local community and lack of experts. It is estimated that the project hampers are caused by: technical difficulties (10%), legal problems (25%), economic problems (30%) and sociological problems (35%); Fig 2.



Fig 2

The construction of Broadband infrastructure is now realizing unorganized throughout Croatia. Efforts are being made to motivate existing and new telecom operators to invest in this business. Investments are left to private investors, which is why there is a lack of a systematic approach of the country to this activity, and which will probably reflect to dynamics of the advances in region.

**Keywords:** Broadband Internet, *EU Directive 2014/61/EU*, Project Slavonian Network, telecommunication infrastructure