### International Symposium on Analytic Hierarchy Process 2020 03 - 06 December 2020



Thursday, 3 December

8:05am **wr1** -

**Workshop 1: Sensitivity Analysis** 

Zoom Workshop Room 1 Chaired by: Dr. Orrin Cooper

9:05am **wrk2** -

Workshop 2: How to conduct a negotiation using AHP

Zoom Workshop Room 2 Chaired by: Prof. Luis Vargas

10:05am **wrкз**-

Workshop 3: How to improve your chance of getting your AHP/ANP

paper published

Zoom Workshop Room 3 Chaired by: Dr. Enrique Mu

11:05am **wrk4**-

Workshop 4: The how and whys of ANP row sensitivity

Zoom Workshop Room 4

Chaired by: Dr. William Adams

12:05pm wrk5 -

Workshop 5: Benefits-Opportunities-Costs and Risks calculations

demystified

Zoom Workshop Room 5 Chaired by: Dr. Elena Rokou

1:05pm **WRK6**-

**Workshop 6: Meeting Facilitation** 

Zoom Workshop Room 6 Chaired by: Mr. Daniel Saaty

Friday, 4 December

8:05am **welc**-

Welcome to ISAHP 2020

Zoom WELC

Chaired by: Dr. Enrique Mu and Rozann Saaty

9:05am **FR\_T1\_S1** -

Track 1 - Session 1

Zoom FR\_T1\_S1

Chaired by: Prof. Luis Vargas

9:05am

Transforming AHP Group Decisions into Fuzzy Priorities - A New Methodology to Aggregate Individual Priorities

» <u>Prof. Oliver Meixner</u>, Ms. Sonja Hackl, Prof. Rainer Haas





Continued 9:22am	from Friday, 4 December  AN UPDATE ON COMBINATORIAL METHOD FOR AGGREGATION OF	11:05am	FR_T2_S1 - Track 2 - Session 1 Zoom FR_T2_S1
J.224111	EXPERT JUDGMENTS IN AHP		Chaired by: Ilker Topcu
9:39am	» <u>Dr. Sergii Kadenko</u> , Dr. Vitaliy Tsyganok  VECTOR COMPRESSION METHOD TO CONVERT THE INCOMPLETE MATRIX OF PAIRWISE COMPARISONS IN THE ANALYTIC HIERARCHY PROCESS  » Dr. Alexander Bochkov, <u>Mrs. Alexandra Ridley</u> , Mrs. Nataliya Kuzmina, Dr. Nikolay Zhigirev	11:05am 11:22am	A MULTI-ATTRIBUTE DECISION MAKING MODEL FOR HOSPITAL LOCATION SELECTION  » Ms. Gül İmamoğlu, Dr. Ilker Topcu  UNCERTAINTY AND COMPATIBILITY IN AHP MODELING: CONSENSUS BUILDING IN PROJECT PORTFOLIO FORMULATION FOR
9:05am	FR_T6_S1 - Track 6 - Session 1 Zoom FR_T6_S1 Chaired by: Dr. Monica Garcia Melon	11:39am	MULTILATERAL ORGANIZATIONS  » Dr. Ileana Grave, Ms. Paola Gómez-Priego, <u>Dr. Luis Antonio</u> <u>Bojórquez-Tapia</u> Neutrosophic Analytic Hierarchy Process for Evaluating a New
9:05am	Businesses as social partners in gender policies: Assessment of the actors' expectations to contribute to gender equality		Servicizing Business Model of Transportation  » Dr. Saliha Karadayi-Usta
9:22am	» Dr. Paula Otero-Hermida, <u>Dr. Hannia Gonzalez-Urango</u> A TOOL FOR MONITORING THE UNDER REPRESENTATION OF WOMEN IN CONFERENCES AND EVENTS  » Mrs. Carmen Corona-Sobrino, Dr. Monica Garcia Melon, Dr. Rocío	11:05am	FR_T3_S1 - Track 3 - Session 1 Zoom FR_T3_S1 Chaired by: Prof. Rafikul Islam
9:39am	Poveda-Bautista, Dr. Hannia Gonzalez-Urango  ANPSort II Method: an Experimentation to Assess the Resilience of a Socio-Ecological System  » Dr. Vanessa Assumma, Prof. Marta Bottero, Prof. Alessio Ishizaka	11:05am	LAYOUT ASSESSMENT WITH STRUCTURING AND MATHEMATICAL MODELING BY THE AHP METHOD  » Mr. Lucas Ramon dos Hermogenes, Mr. Miguel Moreira, Ms. Lorena Berzins, Dr. Marcos dos Santos
10:05am	KEY1 - Leadership in complex and chaotic situations Zoom KEY1	11:20am	Applying AHP technique to choose Product Type in Paper factories » Mr. Mohammad Solemani Diarjan, Prof. Majid Azizi
	Chaired by: Dr. Blaženka Divjak	11:35am	ENHANCING FINANCIAL AND STRATEGIC PERFORMANCE OF AN OIL AND GAS COMPANY  » Prof. Rafikul Islam, Dr. Deven Sharma KRISHNAN

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Continued	Continued from <b>Friday, 4 December</b>				
12:05pm	FR_T1_S2 - Track 1 - Session 2 Zoom FR_T1_S2 Chaired by: José María Moreno-Jiménez				
12:05pm	NOTES ON THE USE OF COMPATIBILITY INDEX IN THE ANALYTIC HIERARCHY PROCESS  » Prof. MinSuk YOON				
12:22pm	Reducing the number of expert pair-wise comparisons during decision support using AHP  » Dr. Oleh Andriichuk, Dr. Vitaliy Tsyganok, <u>Dr. Sergii Kadenko</u>				
12:39pm	Priority Vector Estimation: Consistency, Compatibility, Precision » <u>Dr. Stan Lipovetsky</u>				
12:05pm	FR_T5_S1 - Track 5 - Session 1 Zoom FR_T5_S1 Chaired by: Prof. Claudio Garuti				
12:05pm	HOW TO ASSIST TO BETTER AND FASTER MEDICAL DIAGNOSES THROUGH MEDICAL SAPIENS WEB PLATFORM  » Prof. Claudio Garuti				
12:20pm	A Decision Support Tool for Hospital Project Sustainability Evaluation  » Dr. Carlotta Patrone, Dr. Antonio G. Latora, Prof. Roberto Revetria				
12:35pm	Prioritizing High-Risk Diseases and Non-Trauma-Mediated Diseases in a Triage on Medical Sapiens Platform  » Ms. Kazi Tasnim				

1:05pm **POS1** -

**Poster Session 1** 

Zoom POS1

Chaired by: Dr. Enrique Mu

### **BIBLIOMETRIC STUDY ON AHP AND URBAN MOBILITY**

» Mr. David Ruiz, Dr. Fernando Marins, Dr. Valerio Salomon

# ADJUSTED INTANGIBILITY-AWARE ASSESSMENT OF THE UTILISATION OF BIOGAS PLANT TECHNOLOGY APPLICATION POTENTIAL

» Prof. Grzegorz Ginda, Dr. Marta Szyba

# HOSPITAL AIRCRAFT IN THE FIGHT AGAINST THE CORONAVIRUS PANDEMIC: STRUCTURING AND MODELING A COMPLEX PROBLEM USING AHP AND VFT METHODS

» Mr. Igor Pinheiro de Araújo Costa, Mr. Arthur Pinheiro de Araújo Costa, Mr. José Victor de Pina Corriça, Mr. SÉRGIO MITIHIRO DO NASCIMENTO MAÊDA, Ms. Luiz Frederico Horácio de Souza de Barros Teixeira, Mr. Marcos Alexandre Pinto de Castro Junior, Dr. Carlos Francisco Simões Gomes, Dr. Marcos dos Santos

## APPLICATIONS OF THE ANALYTIC HIERARCHY PROCESS METHOD IN FORECASTING: A REVIEW OF THE LITERATURE

» <u>Mrs. Lidiane Cristina Oliveira</u>, Dr. Bruna Cristine Scarduelli Pachecco, Dr. Claudio Luis Piratelli

# Identifying Factors that Influence Customers' Interest in Buying Refurbished Smartphones: An Indonesian Context

» <u>Dr. Siana Halim</u>, Dr. Shu-San Gan, Mr. Jerry Marcello Oentoro

## Saturday, 5 December

8:05am **SA T2 S2** -

Track 2 - Session 2
Zoom SA T2 S2

Chaired by: Cigdem Kadaifci





Continued	from <b>Saturday</b> , <b>5 December</b>	9:05am	On the similarity among priority deriving methods for the AHP » Dr. Pawel Kazibudzki		
8:05am	Application Experience of the AHP for the Antarctic issues » Mr. Oleksandr Kuzko, Mr. Mykola Leonov	9:22am	Proposals for the set of pairwise comparisons  » Mr. Zsombor Szádoczki, Dr. Sándor Bozóki, Mr. Hailemariam Abebe Tekile		
8:22am	AN MCDM APPROACH FOR CROP PATTERN SELECTION » Dr. Püren Veziroğlu, Dr. Ilker Topcu	9:39am	ANP Supermatrices: Lessons from Hierarchies » Dr. Orrin Cooper, Dr. William Wedley		
8:39am	ANALYTIC HIERARCHY PROCESS FOR EVIDENCE-BASED POLICY MAKING  » Mr. Yoichi lida	9:05am	SA_T7_S1 - Track 7 - Session 1 Zoom SA T7 S1		
8:05am	SA_T6_S2 -		Chaired by: Prof. Xi Chen		
	Track 6 - Session 2  Zoom SA_T6_S2  Chaired by: Dr. Hannia Gonzalez-Urango	9:05am	SELECTION OF APPROPRIATE PROJECT MANAGEMENT METHODOLOGIES FOR EMERGENCY PROJECTS USING ANALYTIC HIERARCHY PROCESS		
8:05am	SENSITIVITY ANALYSIS FOR THE ASSESSMENT OF ADAPTIVE CAPACITY TO CLIMATE CHANGE: A CASE OF STUDY FROM BRAZIL  » Dr. Ileana Grave, Dr. Luis Antonio Bojórquez-Tapia, Ms. Alejandra Estrada-Barón, Prof. Donald R Nelson, Prof. Hallie Eakin	9:22am	<ul> <li>» <u>Dr. Chris Amponsah</u>, Ms. Tamara Opokua Amponsah</li> <li>HOW YOUNG POPULATION MAKES PERSONAL FINANCE DECISIONS? EVIDENCE FROM NORTH MACEDONIA</li> <li>» <u>Ms. Tamara Kaftandzieva</u>, Prof. Violeta Cvetkoska</li> </ul>		
8:20am	Assessing the barriers to the development of electric vehicles in the urban transport network of Valencia  » Ms. Paula Bastida-Molina, Mr. David Ribo-Perez, Dr. Tomás Gómez-	9:39am	Prioritized Multi-Commodity Flow Model and Algorithm » Mr. Durga Khanal, Prof. Urmila Pyakurel, Prof. Tanka Dhamala		
	Navarro, Dr. Elías Hurtado-Pérez	10:05am	PLN1 -		
8:35am	PRIORITIZING THE EFFECT OF MEDIA'S INFLUENCE ON PEOPLE'S MENTAL HEALTH PERCEPTIONS  » Ms. Anastasia Marsh, Dr. Enrique Mu		Plenary: Three developments of the Analytic Hierarchy Process: Calibrated Fuzzy AHP, AHPSort and GAHPO Zoom PLN1 Chaired by: Prof. Alessio Ishizaka		
9:05am	SA_T1_S3 - Track 1 - Session 3 Zoom SA_T1_S3 Chaired by: Prof. Luis Vargas	11:05am	SA_T2_S3 - Track 2 - Session 3 Zoom SA_T2_S3 Chaired by: Cigdem Kadaifci		





Continued from <b>Saturday, 5 December</b>		12:05pm	AHP and Two-Envelope Paradox Resolution via Nonlinear Scaling » <u>Dr. Stan Lipovetsky</u>			
11:05am	Guidance for Higher Education to provide the necessary soft skills to meet the needs of Industrial era 4.0 using AHP and Fuzzy AHP » Dr. Jozef Raco, Prof. James Krejci, Prof. Johanis Ohoitimur, Mr. yulius raton, Dr. Jeanette Soputan, Dr. Stevanus Ngenget, Mr. Frankie Taroreh	12:22pm 12:39pm	Influence analysis in ANP models - Advantages and Pitfalls » Dr. Elena Rokou, Dr. William Adams  Building an evaluation "common ground" for research on AHP			
11:22am	INCREASING EXPORT POTENTIAL OF CITRUS PRODUCTION: A CASE STUDY in CUKUROVA REGION  » Dr. Püren Veziroğlu, Prof. Faruk Emeksiz		refinements  » Mr. robin rivest			
11:39am	» <u>Dr. Puren Vezirogiu</u> , Prof. Faruk Emeksiz  PROJECT MANAGER SELECTION BY ANALYTIC HIERARCHY PROCESS  » Dr. serhat aydin, <u>Dr. mehmet yorukoglu</u>	12:05pm	SA_T11_S1 - Track 11 - Session 1 Zoom SA_T11_S1 Chaired by: Dr. Orrin Cooper			
11:05am	SA_T8_S1 - Track 8 - Session 1 Zoom SA_T8_S1 Chaired by: Dr. Valerio Salomon	12:05pm	Investigation of Catalyst Projects and Urban Design Qualities in Six Central Streets of Hamedan  » Mr. sajjad zolfigol, Dr. mehran Alalhesabi, Dr. seyed majid mofidi shemirani			
11:05am	Assessing Stakeholders' Conflicts in Urban Logistics Networks through Analytic Hierarchy Process  » Dr. Francesco Ciardiello, Prof. Andrea Genovese, <u>Dr. Shucheng Luo</u> , Dr. Antonino Sgalambro	12:22pm	CLASSIFICATION RELIABILITY FOR GIS-MCDA: AHP AND SENSITIVITY ANALYSIS  » Dr. Ileana Grave, Mr. Victor Hernández-Díaz, Mr. Fidel Serrano-Candela, Ms. Tatiana Merino, Dr. Yosune Miquelajauregui, Dr. Luis Antonio Bojórquez-Tapia			
11:22am	MULTI-CRITERIA VALUE ASSESSMENT FOR BUSINESS-TO-BUSINESS » Mrs. Ana Beatriz Tocalinho, Mr. Antonio Netto, Dr. Valerio Salomon	12:39pm	A MULTI CRITERIA ANALYSIS TO EVALUATE FUNCTIONING OF PHOTOVOLTAIC POWER PLANTS IN PAKISTAN  » Mr. Muhammad Asad, Prof. Antonella Petrillo, Prof. Fabio De Felice			
11:39am	Strategic Supplier Selection: The Case of International Food Trading Company  » Dr. Chuvej Chansa-ngavej, Ms. Natchanok Paramaporn	1:05pm	POS2 - Poster Session 2 Zoom POS2			
12:05pm	SA_T1_S4 - Track 1 - Session 4		Chaired by: Prof. Antonella Petrillo			
	Zoom SA_T1_S4 Chaired by: José María Moreno-Jiménez		Total Decision software » Mr. Daniel Villa, Prof. Claudio Garuti			

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### AHP FOR EVERYBODY: INNOVATION THROUGH MOBILE APPLICATION FOR PERSONAL DECISIONS

» Mr. Sovit Poudel, Mr. Shashi Bhattarai

#### SCHOOL AND ACADEMIC PERFORMANCE: SOME EVIDENCE FROM ITALY

» Dr. Antonella Ferraro, Prof. Paola Mancini, Dr. Gabriella Marcarelli

COMPARISON OF THE APPLICATION OF PRODUCTION MANAGEMENT TOOLS AND TOPSIS-AHP METHODS: BEARING **MAINTENANCE PROCESS** 

» Ms. José Oliveira

Sunday, 6 December
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8:05am	SU	<b>T2</b>	<b>S4</b> -
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Track 2 - Session 4

Zoom SU T2 S4

Chaired by: Cigdem Kadaifci

8:05am **Applying the Analytic Hierarchy Process in Faculty Search** 

» <u>Dr. Carlo Smith</u>, Dr. Ozden Bayazit

8:20am ANALYSIS OF THE TECHNICAL AND ECONOMIC FEASIBILITY OF **USING ELECTRIC PROPULSION IN BRAZILIAN NAVY PASSENGER** 

TRANSPORT VESSELS: AN APPROACH OF AHP METHOD

» <u>Mr. SÉRGIO MITIHIRO DO NASCIMENTO MAÊDA</u>, Mr. Igor Pinheiro de Araújo Costa, Ms. Luiz Frederico Horácio de Souza de Barros Teixeira, Dr. Carlos Francisco Simões Gomes, Dr. Marcos dos Santos, Mr. Marcos Alexandre Pinto de Castro Junior, Mr. Arthur Pinheiro de

Araújo Costa, Mr. José Victor de Pina Corriça

8:35am	STRATEGIC PRIORITIES OF THE RELIGIOUS INSTITUTION USING COMBINATION OF SWOT AND FUZZY-AHP. CASE STUDY OF THE CONGREGATION OF MISSIONARIES OF THE SACRED HEART  » Dr. Jozef Raco, Prof. Johanis Ohoitimur, Prof. James Krejci, Mr. yulius raton, Mr. Anselmus Jamlean, Dr. Ignasius Welerubun, Dr. Rafael Tanod
8:05am	SU_T6_T7 - Tracks 6 and 7 Zoom SU_T6_T7 Chaired by: Müjgan Sağır
8:05am	Selection of medical waste treatment centers using ANP » Ms. Xin Li, Prof. Xi Chen, Prof. Mujgan Sagir
8:20am	Model to determine the investment priority for telecontrolled facilities in Sanitary Industry in Chile to adapt to climate change » Mr. Claudio Macuada, Dr. Astrid Oddershede, Dr. Luis Quezada, Dr. Pedro Palominos
8:35am	AHP- BASED SOCIAL VULNERABILITY INDEX FOR SMALL FISHERIES IN YUCATAN, MEXICO  » Ms. Tatiana Merino, Dr. Ileana Grave, Dr. Luis Antonio Bojórquez-Tapia
9:05am	SU_T1_S5 - Track 1 - Session 5 Zoom SU_T1_S5 Chaired by: Prof. Luis Vargas
9:05am	Weighted average vs TOPSIS: a comparison of aggregation methodologies for AHP  » <u>Dr. Francesco Ciardiello</u> , Prof. Andrea Genovese
9:22am	Extension of the AHP method to group decision-making for determining the best care center of severe cases of covid-19 in Ouagadougou/Burkina Faso: The case of three decision makers.  » Dr. Zoïnabo Savadogo, Mr. Frédéric NIKIEMA, Prof. Somdouda





Continued from <b>Sunday, 6 December</b>		11:05am	DISPATCH PRIORITIZATION IN AN AGRICULTURAL FERTILIZER COMPANY USING AHP AND TOPSIS  » Mr. Jorge Rojas, Dr. Juan Osorio
9:39am	TRANSMISSION LINE ROUTING USING GIS TOOLS OF SPATIAL SCIENCES  » Mr. Nawa Raj Chapagain, <u>Mr. Subrat Subedi</u> , Ms. Neha Joshi, Mr. Bibek Rai, Mr. Binay Paudyal, Mr. Ashish Regmi, Mr. Rajiv Bishwokarma, Mr. Saroj Ghimire, Mr. Komal Atreya	11:22am	SUPPLIER SELECTION USING AHP AND TOPSIS IN FOOD COMPANIES CONSIDERING OPERATIONAL RISK  » Mrs. Jenny Hurtado, Mrs. Katherine Hurtado, Dr. Juan Osorio, Mrs. Carolina Lima
9:05am	SU_T5_S2 - Track 5 - Session 2 Zoom SU_T5_S2 Chaired by: Mario Sandoval	11:39am	THE ANALYTIC HIERARCHY PROCESS: APPLICATION TO THE SELECTION OF THE BEST E-WALLET IN KLANG VALLEY, MALAYSIA.  » Mr. Rajan Amaloo
9:05am	EVALUATING THE EFFECT OF ORGANIZATIONAL MINDFULNESS IN HEALTH ORGANIZATIONS IN COLOMBIA  » Ms. Yuli Leon, Dr. Enrique Mu	11:05am	SUN_APPS - AHP Applications Zoom SUN_APPS Chaired by: Rozann Saaty
9:22am	SELECTION OF BEST HOSPITAL FOR KIDNEY TRANSPLANTATION USING AHP: A CASE FOR TURKEY  » Dr. Fatma Kutlu Gündoğdu, Mr. Ali Karasan	11:05am	A MCDM MODEL FOR MEASURING THE PREPAREDNESS LEVEL OF SALES DEPARTMENTS IN COVID-19 AND FUTURE PANDEMICS: ELECTRICAL APPLIANCE SECTOR
9:39am	FUZZY AHP MODEL TO SUPPLIER PERFORMANCE EVALUATION IN PUBLIC INSTITUTIONS  » Ms. Juliana Leyton, Dr. Juan Osorio		» <u>Dr. Miguel Ortíz-Barrios</u> , Dr. Iván-Darío Gómez-Villar, Dr. Arlen Borrego-Areyanes, Prof. Antonella Petrillo
10:05am	PLN2 - Plenary: AHP/ANP: Issues and Insights for the Future Zoom PLN2	11:22am	DETERMINING CRITERIA AND SUB-CRITERIA WEIGHTS FOR THE SELECTION OF REGIONAL CENTERS OF COMPETENCE IN CROATIA  » Dr. Bojan Zugec, Prof. Blazenka Divjak, Ms. Nina Begicevic Redjep
	Chaired by: Dr. William Wedley	11:39am	AHP for Land Valuation in Land acquisition for Infrastructure Development  » Dr. Subash Ghimire
11:05am	SU_T3_S2 - Track 3 - Session 2 Zoom SU_T3_S2 Chaired by: Azilah Anis	12:05pm	SU_T4_S1 - Track 4 - Session 1 Zoom SU_T4_S1 Chaired by: Prof. Alessio Ishizaka





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12:05pm APPLICATION OF THE AHP-TOPSIS-2N HYBRID METHOD FOR SELECTION OF AN ATTACK HELICOPTER TO BE ACQUIRED BY THE

**BRAZILIAN NAVY** 

» <u>Mr. Igor Pinheiro de Araújo Costa</u>, Mr. Marcos Alexandre Pinto de Castro Junior, Mr. SÉRGIO MITIHIRO DO NASCIMENTO MAÊDA, Dr. Luiz Paulo Fávero, Mr. Arthur Pinheiro de Araújo Costa, Mr. José Victor de Pina Corriça, Dr. Carlos Francisco Simões Gomes, Dr. Marcos dos

Santos

12:21pm Evaluation of Key Technological Tools in terms of Supply Chain

Sustainability in the Digitalization Era with Different Analytic

**Hierarchy Process Methods** 

» Dr. ABDULLAH YILDIZBASI, Mr. Cihat OZTURK, Dr. Sachin Kumar

MANGLA, Prof. Yiğit KAZANCOGLU

12:37pm USING AHP AND QFD IN THE INVESTIGATION AND REFINEMENT OF

**E-BANKING SERVICES** 

» <u>Dr. Georgios Paltayian</u>, Prof. Andreas Georgiou, Prof. Katerina

Gotzamani

1:05pm **PNL1** -

**AHP Students Roundtable** 

Zoom PNL1

Chaired by: Dr. Enrique Mu and Dr. Elena Rokou and Dr. Anna Florek-

Paszkowska

2:05pm **AWRD** -

**Closing/ Awards Ceremony** 

Zoom AWRD

Chaired by: Dr. Enrique Mu and Rozann Saaty