PROCEEDINGS BOOK – VOL 1

MIDDLE EAST INTERNATIONAL CONFERENCE ON CONTEMPORARY SCIENTIFIC STUDIES-VI



September 20-22, 2021
Beirut, Lebanon
Saint Joseph University of Beirut, Faculty of Educational Sciences

Editors

Prof. Mohamad RAMMAL
Samira KHADHRAOUI ONTUNC

Institute Of Economic Development And Social Researches Publications®
(The Licence Number of Publicator: 2014/31220)
TURKEY

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İksad Publications - 2021©

Issued: 05.10.2021
ISBN - 978-625-7464-25-3

TOTAL NUMBER OF PAPERS FROM TURKEY

73

TOTAL NUMBER OF INTERNATIONAL PARTICIPANTS

76

PARTICIPANTS COUNTRIES

Lebanon, Turkey, Romania, Azerbaijan, Ethiopia, Pakistan, Nigeria, Mexico, USA, India, Iraq, Vietnam, China, Malaysia, Indonesia, Afghanistan, Republic of Moldova, Brazil, Bulgaria, Algeria, South Africa, Tunisia

TOTAL ACCEPTED PAPERS

149

TOTAL REJECTED PAPERS

47

EVALUATION PROCESS

All applications have undergone a double-blind peer review process

PRESENTATION

Oral Presentation

CONFERENCE ID

Saint Joseph University of Beirut
Faculty of Educational Sciences

TITLE

MIDDLE EAST INTERNATIONAL CONFERENCE ON CONTEMPORARY SCIENTIFIC STUDIES-VI

DATE - PLACE

September 20-22, 2021 Beirut, Lebanon

GENERAL COORDINATOR

SAMIRA KHADHRAOUI ONTUNC

LANGUAGES

Turkish, English, French, Arabic

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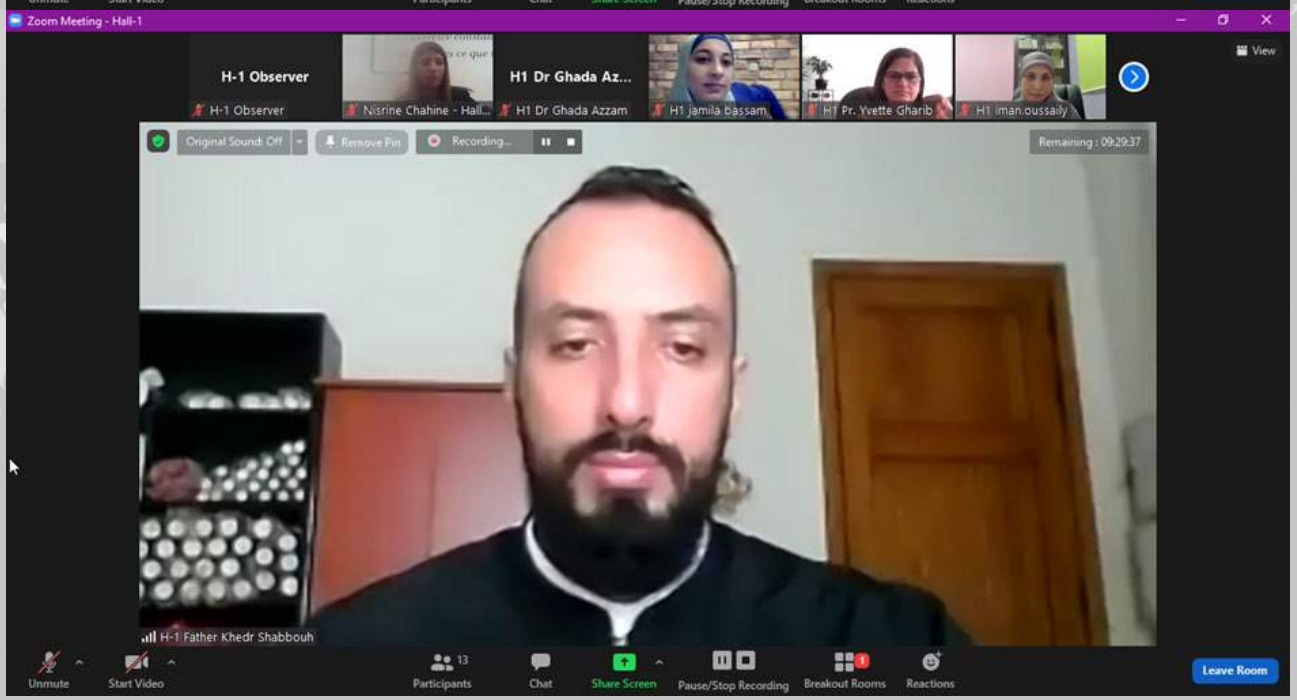
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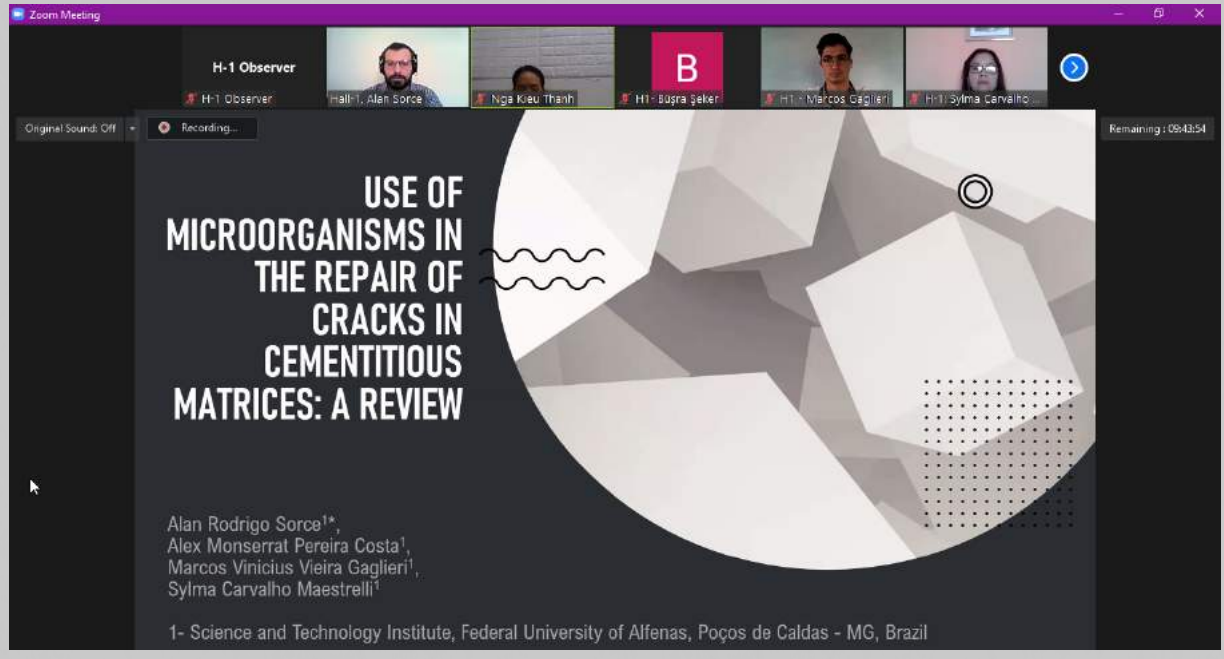


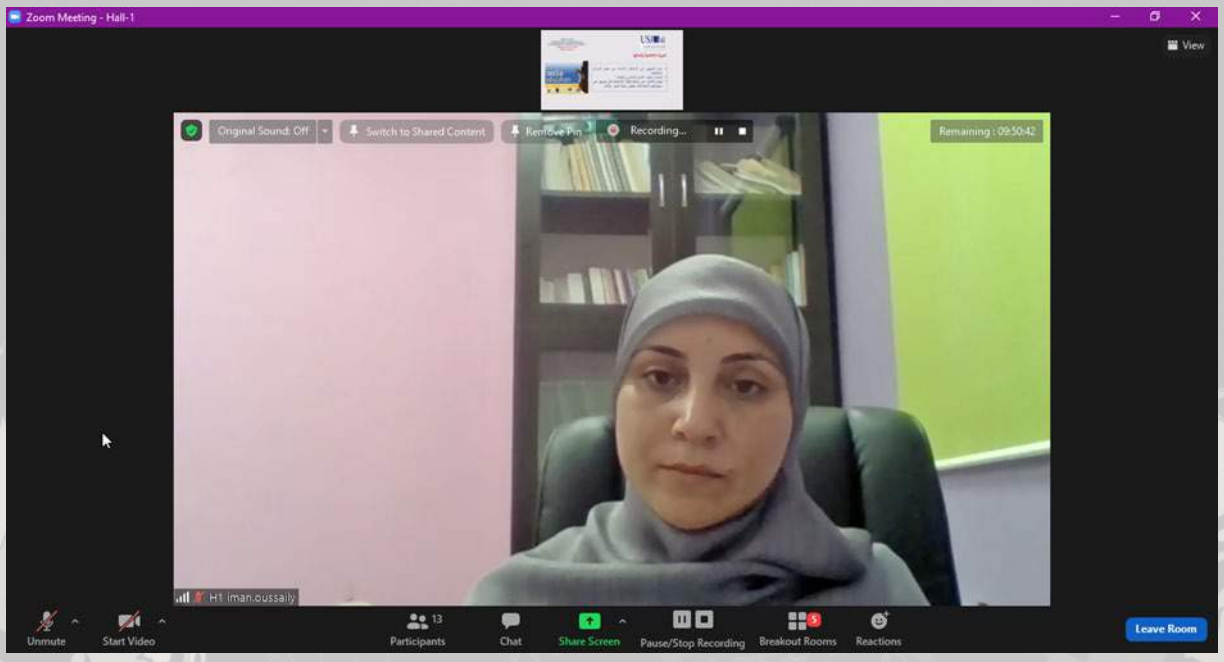


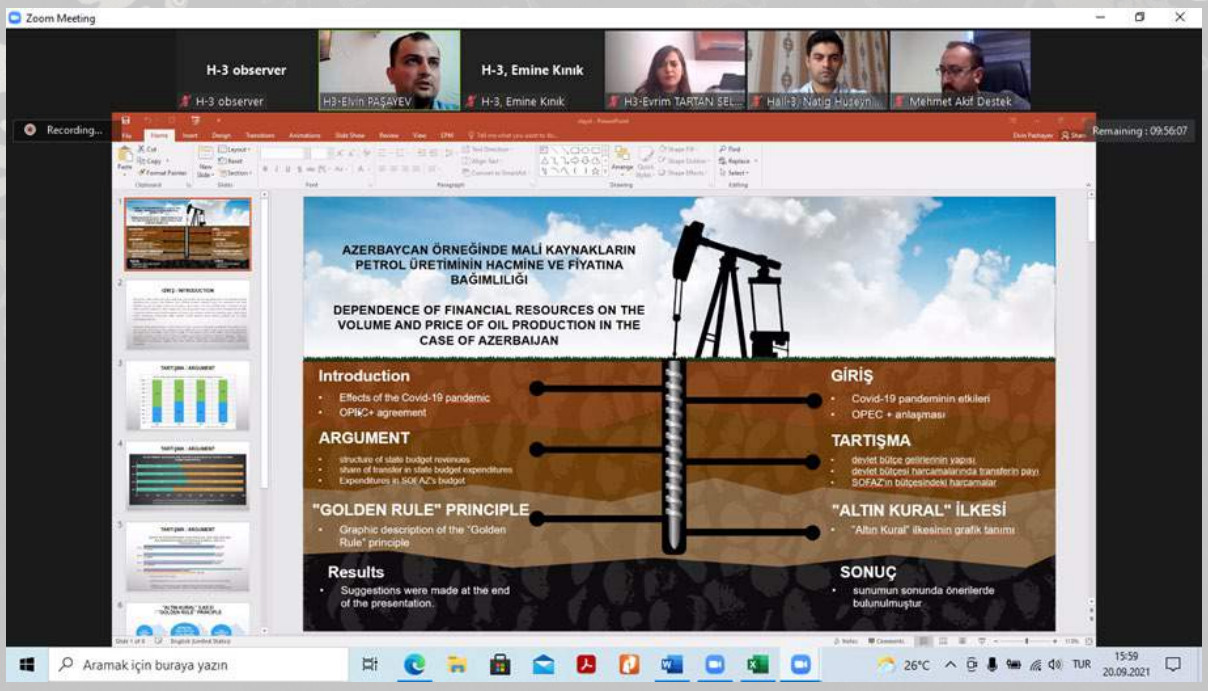


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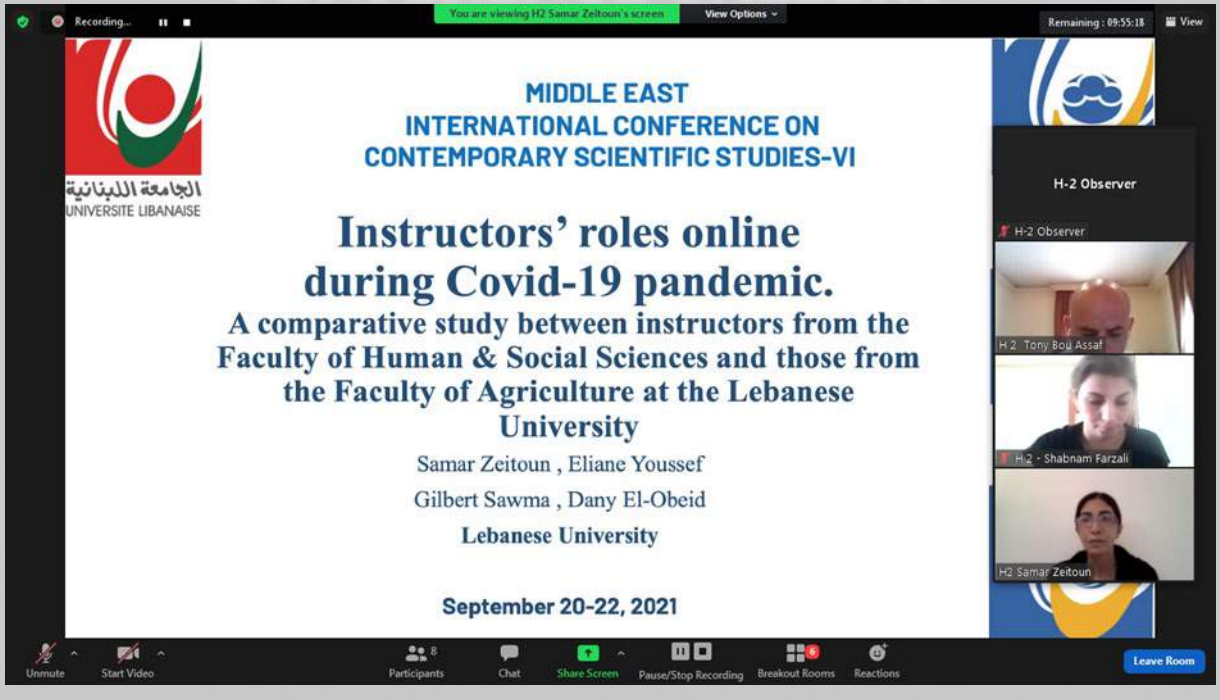
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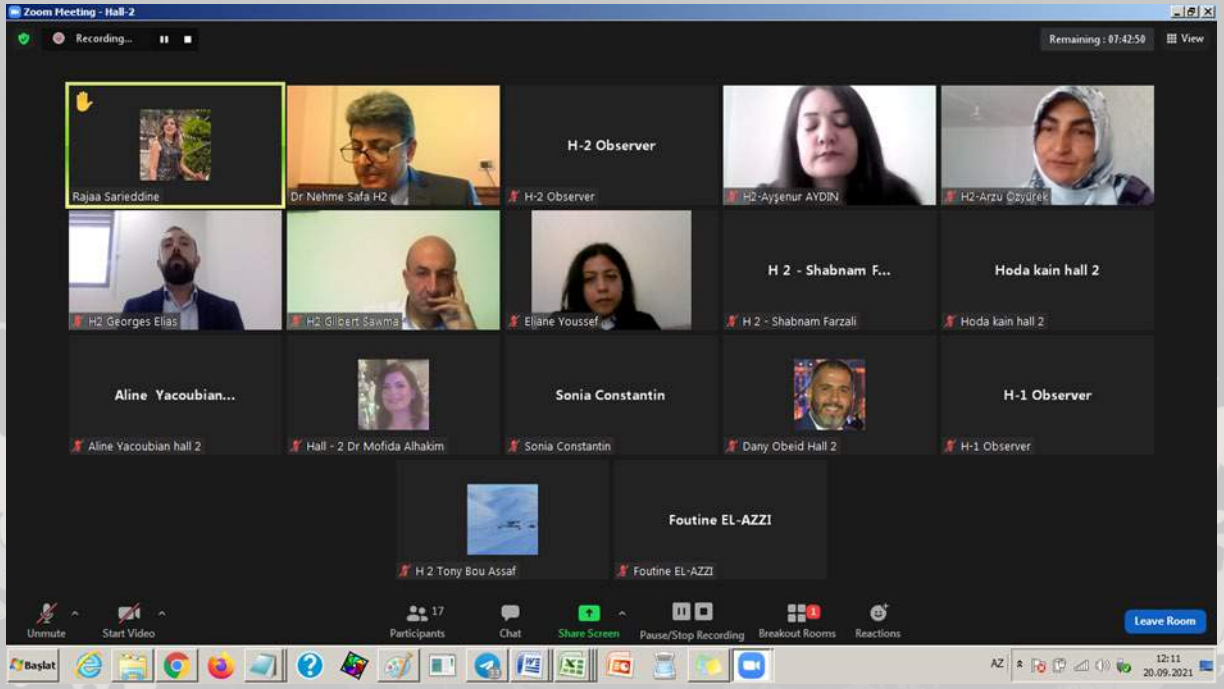


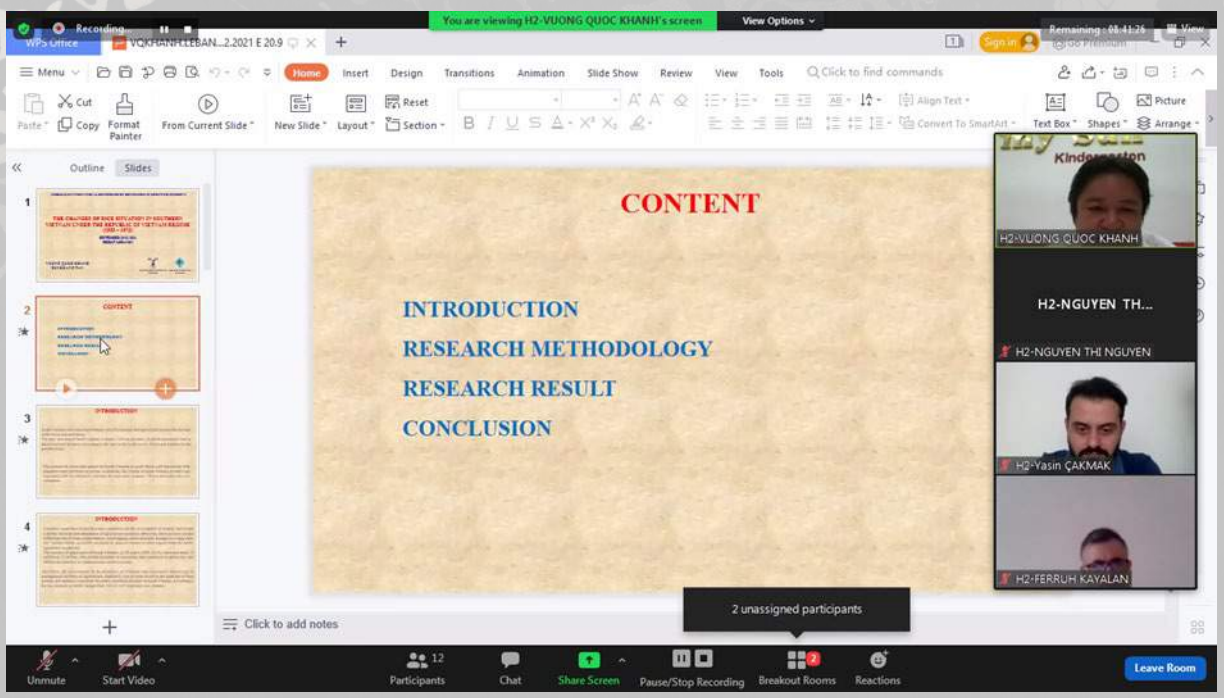




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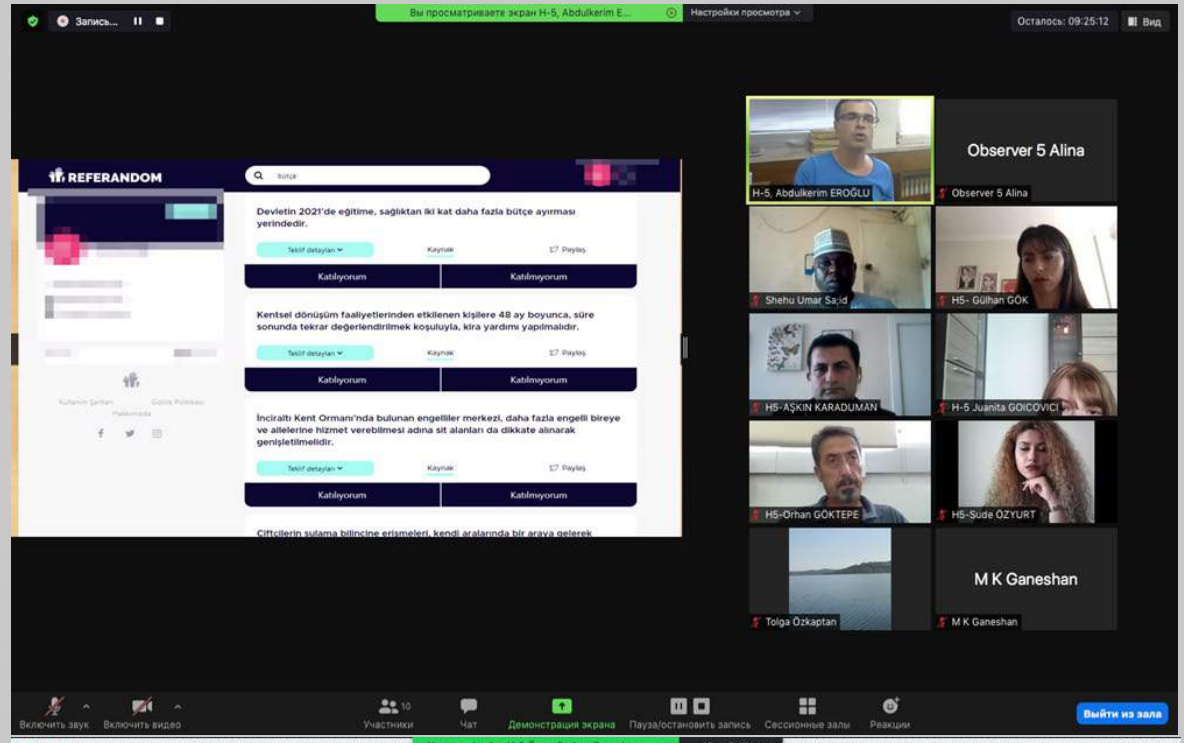






MIDDLE EAST INTERNATIONAL CONFERENCE ON CONTEMPORARY SCIENTIFIC STUDIES-VI

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MIDDLE EAST INTERNATIONAL CONFERENCE ON CONTEMPORARY SCIENTIFIC STUDIES-VI

September 20-22, 2021
Beirut, Lebanon

Saint Joseph University of Beirut
Faculty of Educational Sciences

CONFERENCE PROGRAM

MIDDLE EAST INTERNATIONAL CONFERENCE ON CONTEMPORARY SCIENTIFIC STUDIES-VI

Participant Countries: *Lebanon, Turkey, Romania, Azerbaijan, Ethiopia, Pakistan, Nigeria, Mexico, USA, India, Iraq, Vietnam, China, Malaysia, Indonesia, Afghanistan, Republic of Moldova, Brazil, Bulgaria, Algeria, South Africa, Tunisia*



Online Conference (Via ZOOM)

Meeting ID:
891 4504 9887
Passcode:
999863

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exp. Dr. Mohammad Rammal

OPENING SPEECH

20.09.2021

Beirut Local Time: 09:30 – 10:00

Mustafa Latif Emek
President & Founder of the
*Institute of Economic Development And Social Research (**IKSAD**)*
-Welcoming Speech-

Prof. Patricia Fata (el) Rached
HONORARY CHAIR
Saint Joseph University of Beirut, Dean of Faculty of Educational Sciences

Prof. Mohammad Rammal
Saint Joseph University Of Beirut
CHAIR OF ORGANIZING COMMITTEE

20.09.2021 | SESSION-1 | HALL-1

Beirut Local Time: 10^{00}-12^{30}

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Prof. Mohamad Rammal

Author	Affiliation	Presentation title
Dr. Ghada Fendi Azzam	Saint Joseph University, Lebanon	THE ROLE OF MEDIA EDUCATION IN STIMULATING SOCIAL SKILLS IN ADOLESCENT PUPILS
Prof. Mohamad Rammal **Prof. Nehme Safa** **Prof. Yvette Gharib** **Prof. Patricia Fata (el) Rached**	Saint Joseph University, Lebanon	RESEARCH TRENDS OF DOCTORAL STUDENTS AT THE FACULTY OF EDUCATIONAL SCIENCES OF THE UNIVERSITY OF SAINT JOSEPH IN BEIRUT
Father Khedr Al Shaboua **Prof. Mohamad Rammal**	American University of Beirut Medical Center. Lebanon	THE IMPACT OF THE ADMINISTRATIVE STYLE FOLLOWED BY THE DIRECTORS IN IMPROVING THE PRODUCTIVITY LEVEL OF TEACHERS
Prof. Mohammad Rida Rammal **Jamila Ali Bassam**	Saint Joseph University, Lebanon	THE ARABIC LANGUAGE IN THE RANKS OF THE SECOND CYCLE AND THE ROLE OF TECHNOLOGY IN ITS DEVELOPMENT (IN ONE THE SCHOOLS IN TRIPOLI - LEBANON)
Fadia Hussein	Saint Joseph University, Lebanon	PROBLEMS OF EDUCATION IN 21st CENTURY SCHOOL
Iman Ali Oussaily	Saint Joseph University, Lebanon	THE ROLE OF EDUCATIONAL SUPERVISION IN THE PROFESSIONAL DEVELOPMENT OF NEW KINDERGARTENERS (IN SOME PRIVATE SCHOOLS IN MOUNT LEBANON)
Helena Saade	Saint Joseph University, Lebanon	HARMONIZATION OF THE ARABIC TERMINOLOGY IN HIGHER EDUCATION
EL NAHAS Nadine **Prof. MOGHAIZEL NASR Nada**	Saint Joseph University, Lebanon	IMPACT OF THE USE OF AUGMENTED REALITY ON STUDENT MOTIVATION AS WELL AS ON THE ACQUISITION OF CONCEPTS IN BIOLOGY
Prof. Ghassan Yaakoub **Nisrine Chahine**	Saint Joseph University, Lebanon	THE EFFECTIVENESS OF IMPLEMENTING A PILOT PROGRAM TO ENHANCE PSYCHOLOGICAL RESILIENCE AMONG ADOLESCENTS IN SOME BEIRUT SCHOOLS
Rifqi Hidayatullah **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	THE DIFFERENCES OF ISLAMIC AND CONVENTIONAL ECONOMY

(All speakers required to be connected to the session 10 min before the session starts)

Moderator is responsible for ensuring the smooth running of the presentation, managing the group discussion and dynamics.

20.09.2021 | SESSION-1 | HALL-2

Beirut Local Time: **10^{00}-12^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Prof. Nehme Safa

Author	Affiliation	Presentation title
Dr. Kassem Mohamad Zein	Saint Joseph University, Lebanon	THE ADMINISTRATIVE APPARATUS OF LEBANON'S OFFICIAL VOCATIONAL EDUCATIONAL INSTITUTIONS AND THE DEGREE TO WHICH ADMINISTRATIVE REQUIREMENTS FOR EDUCATIONAL EXCELLENCE ARE APPLIED (OFFICIAL VOCATIONAL AND TECHNICAL EDUCATION SCHOOLS IN SOUTHERN LEBANON – AS AN EXAMPLE)
Tony Bou Assaf	Saint Joseph University, Lebanon	DIRECTING LEARNERS AND THEIR PARENTS TO USE FACEBOOK AND WHATSAPP FOR EDUCATIONAL PURPOSES
Dr. Zeitoun Samar **Youssef Eliane** **Sawma Gilbert** **El-Obeid Dany**	Lebanese University, Lebanon	INSTRUCTORS' ROLES ONLINE DURING COVID-19 PANDEMIC. A COMPARATIVE STUDY BETWEEN INSTRUCTORS FROM THE FACULTY OF HUMAN & SOCIAL SCIENCES AND THOSE FROM THE FACULTY OF AGRICULTURE AT THE LEBANESE UNIVERSITY
Dr. Rajaa Al Ghousieneh **Dr. Mofida Alhakim**	Saint Joseph University, Lebanon	YOUNG LEBANESE WOMEN IN A POST-COVID TIME: CHALLENGES ARE THE SOURCE OF NEW OPPORTUNITIES
Aline Yacoubian	American University of Beirut Medical Center. Lebanon	MENTAL HEALTH OF HEALTHCARE WORKERS DURING THE RECENT INCIDENTS IN LEBANON: A BRIEF REVIEW
Georges ELIAS **Prof. Sonia CONSTANTIN**	Saint Joseph University, Lebanon	TEACHER'S EMOTIONAL EMPATHY AND LEARNER'S METACOGNITION
Dr. Hoda Kain **Prof. Nehme Safa**	Saint Joseph University, Lebanon	INVESTIGATING THE EFFECTS OF ONLINE RESEARCH SKILLS INSTRUCTIONS: A QUASI-EXPERIMENTAL STUDY IN GRADE 8
Arzu Özyürek **Ayşenur Aydın**	Graduate Education Institute, Turkey	INVESTIGATION OF THE IMPORTANCE OF FATHERS' PARTICIPATION IN THE LIFE OF THEIR CHILDREN AT AN EARLY AGE FOR THE PARENTS AND CHILDREN
Arzu Özyürek **Ayşenur Aydın**	Graduate Education Institute, Turkey	DETERMINING THE OPINIONS OF MOTHERS AND TEACHERS ON THE ATTENDANCE OF SICK CHILDREN TO PRE-SCHOOL EDUCATION INSTITUTION
Muhamad irfan zidny **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	CHANGES IN CONVECTION SME BUSINESS PATTERNS BEFORE AND AFTER THE COVID-19 PANDEMIC AT PEKALONGAN

(All speakers required to be connected to the session 10 min before the session starts)

Moderator is responsible for ensuring the smooth running of the presentation, managing the group discussion and dynamics.

20.09.2021 | SESSION-1 | HALL-3

Beirut Local Time: **10^{00}-12^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Assoc. Prof. Dr. Ömer Gökhan ULUM & Dr. Tami Meredith

Author	Affiliation	Presentation title
Assoc. Prof. Dr. Ömer Gökhan ULUM	Mersin University, Turkey	CRITICAL THINKING INSTRUCTION IN EFL SETTINGS IN TURKEY
Dr. Akinrotimi Iyiomo Oyetakin **Ayeni Anthonia Opeyemi**	Adekunle Ajasin Univesity, Nigeria	PRIVATE COST AND EFFICIENCY OF PUBLIC SECONDARY SCHOOL EDUCATION IN ONDO STATE, NIGERIA
Dr. Aylin Yardımcı **Prof. Dr. Arif Sarıçoban**	Kahramanmaraş Sütçü İmam University, Turkey Selçuk University, Turkey	INQUIRY BASED TEACHING: SELF-EFFICACY SKILLS OF EFL INSTRUCTORS
Prof. Oluwatobi Pemede Oyetakin, Sylvia Olayemi	Lagos State University, Nigeria Topmost College of Education, Nigeria	POST-MODERNIST CORRECTIONAL TECHNIQUES ON RECIDIVISM AND ITS DRAW BACKS ON NIGERIAN SYSTEM
Yağmur BAYAR **Assoc. Prof. Dr. Bilal YILDIRIM**	Istanbul Sabahattin Zaim University, Turkey	CHALLENGES FACED BY ADMINISTRATORS IN PRE-SCHOOL EDUCATION INSTITUTIONS AND EFFECTIVE SOLUTIONS
Tami Meredith **Maryanne Fisher**	Dalhousie University, Canada Saint Mary's University, Canada	AN INCLUSIVE APPROACH TO TEACHING INFORMATICS
Assist. Prof. Dr. N.Johnson	Alagappa University, India	EFFECTIVENESS OF TECHNOLOGY-BASED LEARNING ON SCIENCE AMONG HIGH SCHOOL STUDENTS
Assist. Prof. Dr. N.Johnson **T. Geetha**	Alagappa University, India	EFFECTIVENESS OF TURBO TRICK KIT IN DEVELOPING MATHEMATICAL REASONING SKILL OF IX STANDARD STUDENTS IN KARUR DISTRICT
Ismail Olaniyi MURAINA **Akinyemi Edward AIYEGBUSI** **Bernice O. LESI**	Adeniran Ogunsanya College of Education, Nigeria Michael Otedola College of Primary Education, Nigeria	ENSURING TEAM BUILDING LEARNING WITH THE USE OF RELEVANT COLLABORATIVE TOOLS
Nurullah DÜZEN **Hasan Basri MEMDUHOĞLU**	Siirt University, Turkey	DIFFICULTIES ENCOUNTERED BY PRIMARY SCHOOL TEACHERS WORKING IN REGIONS WHERE BILINGUAL CHILDREN LIVE AND SUGGESTIONS FOR SOLUTIONS

(All speakers required to be connected to the session 10 min before the session starts)

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20.09.2021 | SESSION-1 | HALL-4

Beirut Local Time: **10^{00}-12^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Prof. Dr. İsmail Demir

Author	Affiliation	Presentation title
Nurullah Özdoğan Emine Irbaş Murat Eyvaz Ercan Gürbulak Ahmed Albahnasawi Havva Ağır Ebubekir Yüksel	Gebze Technical University, Turkey	COMPOST TECHNOLOGIES IN MUNICIPAL SOLID WASTE MANAGEMENT
Cavidan DEMİR GOKİSİK	Giresun University, Turkey	INVESTIGATION OF THE DETERMINATION OF DIET FIBER, CELLULOSE AMOUNT AND ANTIMICROBIAL ACTIVITIES OF NATURAL EDIBLE PLANTS GROWING IN GIRESUN
Esin Koçak Asst. Prof. Dr. Meral Akkoyun	Bursa Technical University, Turkey	COMPARISON OF THE MECHANICAL PROPERTIES OF CRUDE AND ESTERIFIED WOOD ROSIN ADDED POLYLACTIC ACID FILMS
İsmail Demir Cüneyt Doğan	Afyon Kocatepe University, Turkey	EFFECTS OF DIFFERENT MINERAL ADMIXTURES ON COMPRESSIVE STRENGTH IN FOAM CONCRETE
Muhammet Elmalı İsmail Demir	Afyon Kocatepe University, Turkey	EFFECT OF DIATOMITE CALCINATION DEGREE ON PUZOLANIC ACTIVITY ON CEMENT MORTAR
Yurdakul Aygörmez	Yildiz Technical University, Turkey	PERFORMANCE OF ALUMINUM SLAG AND CLASS C FLY ASH-BASED GEOPOLYMER CONCRETES UPON SEAWATER EXPOSURE
Sibel Tuna Meral Akkoyun	Bursa Technical University, Turkey	EFFECT OF POLYPROPYLENE AND POLYAMIDE 6 ON THE PROPERTIES OF PLA-BASED POLYMERIC COMPOSITE FOAMS
Mehmet Durgun Mehmet Kaplan	Sivas Cumhuriyet University, Turkey Fırat University, Turkey	THE EFFECTS OF THE MOLD MATERIAL ON THE MICROSTRUCTURE AND MECHANICAL PROPERTIES OF ALUMINUM 7075 ALLOY IN CENTRIFUGAL CASTING
Novi Chairunnisa Hendri Hermawan ADİNUGRAHA	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	MARKETING STRATEGY FOR CATFISH USING THE MIX 7P MARKETING METHOD IN NOTOGIWANG PANINGGARAN VILLAGE
Asih Maisaroh Hendri Hermawan ADİNUGRAHA	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	CONSUMER BEHAVIOR AND FACTORS THAT INFLUENCE THE INCREASING PURCHASE POWER OF MASK IN PEKALONGAN CITY COMMUNITY

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20.09.2021 | SESSION-1 | HALL-5

Beirut Local Time: 10^{00}-12^{30}

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Eren Ozkur

Author	Affiliation	Presentation title
Mohd Khairul Ikhwan Rupelin Rafle **Daylon Deo Ganis** **Retchie Ritz Ringgoh**	Keningau Vocational College, Malaysia	DESIGNING TOOL KIT FOR POWER SUPPLY
Rajesh Gogineni **Dhara J Sangani**	Dhanekula Institute of Engineering & Technology, India Vishwakarma Government Engineering College, India	A VARIATIONAL DIRECTED PAN-SHARPENING APPROACH USING CONVOLUTIONAL TYPE GENERALIZED VARIATION AND A VECTORIAL EUCLIDEAN NORM
Luis Miguel Moncayo **Carlos Nelson Elias**	Instituto Militar de Engenharia, Brazil Instituto Militar de Engenharia, Brazil	DENTAL IMPLANT PROSTHETIC ABUTMENT'S SURFACE TREATMENT TO IMPROVE GINGIVAL ADHESION
Fatma AVLİ FIRIŞ	AKEDAŞ Electricity Distribution Company, Turkey	INNOVATIVE SOLUTION FOR REDUCING LOSSES IN MEDIUM VOLTAGE DISTRIBUTION CABLES
Eren Ozkur **Mehmet Ay** **Melda Ozdinc Carpinlioglu**	Gaziantep University, Turkey	DETERMINATION OF THERMOPHYSICAL CHARACTERISTICS OF WATER WITH SILICA NANOPARTICLES: A CALCULATION PRACTICE VERIFIED BY MEASUREMENTS
Samir Zahaf **Dahmane Mouloud** **Mehdi Ghalem**	University of Djilali Bounaama-Khamis Meliana, Algeria	MECHANICAL EFFECTS OF CRACKS IN SPUR GEARS
Dahmane Mouloud **Samir Zahaf** **Soubih Mawhoub** **Benkhettab Mohamed** **Debbaghi Slimane**	University of Djilali Bounaama-Khamis Meliana, Algeria	THERMO-MECHANICAL INSTABILITY ANALYSIS OF CLAMPED-PINNED PIPES CARRYING HOT FLUID
Hanane Boumaza **Chihaooui Salim** **Salim Belhadi** **Mohamed Athmane Yallese** **Abdelkrim Haddad**	May 8th 1945 University, Algeria	MULTI-OBJECTIVE OPTIMIZATION OF MACHINING PARAMETERS DURING DRY TURNING OF INCONEL718 USING TAGUCHI BASED MOORA ANALYSIS
M.Bahrurrizqi **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	PUBLIC RELATIONS ON THE NET

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20.09.2021 | SESSION-2 | HALL-1

Beirut Local Time: **13^{00}-15^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Assist. Prof. Dr. Zeeshan Asghar

Author	Affiliation	Presentation title
Dr. Binyam Zigta	Wolaita Sodo University, Ethiopia	THERMAL RADIATION, CHEMICAL REACTION AND VISCOUS DISSIPATION EFFECTS ON MHD MICRO POLAR BLOOD FLOW WITH STRETCHING CAPILLARY IN THE PRESENCE OF HEAT GENERATION/ ABSORPTION
Dr. Binyam Zigta	Wolaita Sodo University, Ethiopia	EFFECT OF THERMAL RADIATION AND CHEMICAL REACTION ON MHD FLOW OF BLOOD IN STRETCHING PERMEABLE VESSEL
Assist. Prof. Dr. Zeeshan Asghar	National University of Technology, Pakistan	SPERM MOTION THROUGH NON-NEWTONIAN MUCUS ENCLOSED WITHIN SLIPPERY WALLS
S. H. Abbasi **Muhammad Imran** **A. Mahmood** **M. B. Sial**	National University of Science and Technology, Pakistan Center for Advanced Studies in Engineering, Pakistan Beihang University, Beijing, China	MODELING, SIMULATION AND CONTROL OF A BIOMIMETIC UAV WING
Nga Kieu Thanh **Ninh Nguyen Quang**	Vietnam Academy of Social Sciences, Vietnam Vietnam Academy of Science and Technology, Vietnam	RENEWABLE ENERGY DEVELOPMENT IN VIETNAM: RESULTS AND UPCOMING DIRECTIONS
Alan Rodrigo Sorce **Alex Monserrat Pereira Costa** **Marcos Vinicius Vieira Gaglieri** **Sylma Carvalho Maestrelli**	Universidade Federal de Alfenas, Brazil	USE OF MICROORGANISMS IN THE REPAIR OF CRACKS IN CEMENTITIOUS MATRICES: A REVIEW
Rakesh Kumar Yadav **Prof. Zahir Hasan** **Prof. Akhter Hussain Ansari**	APJ Abdul Kalam Technical University, India NSAKCET, Hyderabad, India Aligarh Muslim University, Aligarh, India	VERSATILITY OF ALUMINIUM METAL MATRIX COMPOSITES: A REVIEW
Safi Khaoula **Mohamed Athmane Yallese** **Salim Belhadi** **Mabrouki Tarek** **Hanane Boumaza**	May 8th 1945 University, Algeria University of Tunis El Manar, Tunisia	MULTI-OBJECTIVE OPTIMIZATION IN TURNING OPERATION OF AISI D3 STEEL USING TAGUCHI-DEAR APPROACH

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20.09.2021 | SESSION-2 | HALL-2

Beirut Local Time: **13^{00}-15^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Plamen Iliev

Author	Affiliation	Presentation title
Chief Assistant Plamen Iliev	New Bulgarian University, Bulgaria	SOCIETY, CRISIS AND CONTROL
Assoc. Prof. Kaur Mandeep Kaur Jaismeen	Punjabi University, India	ACKNOWLEDGING EMPTY NEST SYNDROME: EASTERN AND WESTERN PERSPECTIVE
Yasin Çakmak	Mimar Sinan Fine Arts University, Turkey	BOOKBINDINGS WITH BOOKBINDER SEALED FROM VAHID PASHA MANUSCRIPT LIBRARY
Assist. Prof. Dr. Ferruh KAYALAN	Balıkesir University, Turkey	THE ACTIVITIES OF LUTFI EFENDI, A SECURITY POLICE OFFICER IN CYPRUS IN THE ERA OF ABDULHAMID II - 1896
Dr. Eren Alper YILMAZ	Aydın Adnan Menderes University, Turkey	THE LAST TEN YEARS OF TURKISH FOREIGN POLICY IN THE CONTEXT OF POLITICAL RELATIONS WITH RUSSIA
Nguyen Thi Nguyen **Bui Hoang Tan**	Can Tho University, Vietnam	THE IMPACT OF THE LAND TAX POLICY OF THE NGUYEN DYNASTY ON THE AGRICULTURAL SITUATION IN THE MEKONG DELTA REGION OF VIETNAM IN THE FIRST HALF OF THE 19TH CENTURY
Vuong Quoc Khanh **Bui Hoang Tan**	Thu Dau Mot University, Vietnam Can Tho University, Vietnam	THE CHANGES OF RICE SITUATION IN SOUTHERN VIETNAM UNDER THE REPUBLIC OF VIETNAM REGIME (1955 – 1975)
Seljan Mamadzade	Azerbaijan National Academy of Sciences	ETHNIC-POLITICAL UNITS BETWEEN MESOPOTAMIA AND THE URMIA LAKE BASIN IN THE 4TH AND 3RD MILLENIUM BC.
VÜSALƏ KƏRİMOVA-ORUCOVA	Azerbaijan National Academy of Sciences	PATRIOTIC WAR - THE HISTORY OF VICTORY OF OUR GLORIOUS ARMY
Assoc. Prof. Dr. Emine KILIÇASLAN	Aydın Adnan Menderes University, Turkey	UNDERSTANDING THE UNITED NATIONS' APPROACH TO THE CONCEPTS OF "WOMAN", "SECURITY" AND "PEACE" IN THE CONTEXT OF POLITICAL COMMUNICATION (Critical Discourse Analysis of News Related to Afghan Women)

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20.09.2021 | SESSION-2 | HALL-3

Beirut Local Time: **13^{00}-15^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Prof. Dr. Ahmet ÖZTÜRK

Author	Affiliation	Presentation title
Prof. Dr. Ahmet ÖZTÜRK **Dr. M. Sevba ÇOLAK**	Ankara University, Turkey	THE EFFECTS OF DIFFERENT IRRIGATION WATER QUALITY AND IRRIGATION METHODS ON SALT ACCUMULATION IN THE SOIL
Şakir TUNÇ **Prof. Dr. Ahmet ÖZTÜRK**	Ankara University, Turkey	THE EFFECTS OF ABIOTIC STRESS FACTORS ON PLANT PHYSIOLOGY, GROWTH AND YIELD
Feran Aşur **Assoc. Prof. Dr. Arzu Çığ**	Van Yüzüncü Yıl University, Turkey Siirt University, Turkey	XERISCAPE EMPHASIZING THE USE OF NATIVE AND DROUGHT RESISTANT PLANTS (SIIRT PROVINCE EXAMPLE)
Erhan BOZKURT **Hakan KELES** **Servet ARAS**	Yozgat Bozok University, Turkey	OVERVIEW OF STUDIES ON VARIETY DEVELOPMENT IN APPLE
Erhan BOZKURT **Hakan KELES** **Servet ARAS**	Yozgat Bozok University, Turkey	EVALUATION OF HAZELNUT HUSK AS ORGANIC MATERIALS
Hakan KELES	Yozgat Bozok University, Turkey	SOME MORPHOLOGICAL CHARACTERISTICS OF SEBEK VALLEY HAWTHORN GENOTYPES
Hakan KELES **Servet ARAS**	Yozgat Bozok University, Turkey	ECO-FRIENDLY SOLUTIONS AND USAGE OPPORTUNITIES IN AGRICULTURAL PRODUCTION
Simeon Oluwagbenga FASINA **Umar Obafemi SALISU** **Ayobami Ademola AKANMU** **Motunrayo Sekinat SANNI**	Olabisi Onabanjo University, Nigeria Federal University of Technology, Nigeria Transport and Logistics Limited, Nigeria	LOGISTICS OF AGRICULTURAL FREIGHT IN A PERI-URBAN AREA OF IBADAN, NIGERIA
Ayobami Ademola AKANMU **Umar Obafemi SALISU** **Simeon Oluwagbenga FASINA** **Motunrayo Sekinat SANNI** **Oluwatobi Maria OLATUNJI** **Adesoji Olugbenga ADESANYA** **Abimbola Simiat OGUNSESAN** **Jacob Ayorinde ADEJARE**	Federal University of Technology, Nigeria Olabisi Onabanjo University, Nigeria Transport and Logistics Limited, Nigeria Nigerian Institute of Social and Economic Research	FOOD SECURITY AND AGRICULTURAL PRODUCE TRANSPORTATION IN SAKI REGION OF OYO STATE, NIGERIA

(All speakers required to be connected to the session 10 min before the session starts)

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20.09.2021 | SESSION-2 | HALL-4

Beirut Local Time: 13^{00}-15^{30}

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Assist. Prof. Zekiye Aslıhan Öztürk

Author	Affiliation	Presentation title
Selim Taşkaya	Artvin Meslek Yüksekokulu, Turkey	LOCAL DETERMINATION OF BROKEN POINT COORDINATES OF BUILDING PARCELS IN SEPARATE ZONING ISLANDS BY LOCAL CASE
Tuba Nur Olğun	Fırat University, Turkey	A TOGETHER EVALUATION OF ARCHITECTURAL, NATURAL AND CULTURAL HERITAGE IN CONSERVATION: THE CASE OF IRAN/KANDOVAN
Mine Özovacı Kılıç	Gaziantep University, Turkey	CUPOLA STRUCTURES IN ANATOLIAN SELJUK AND TERCAN MAMA HATUN CUPOLA EXAMPLE
Kübra GÜLLÜ	Hasan Kalyoncu University, Turkey	INVESTIGATION OF GAZIANTEP HISVAHAN MODEL RE-FUNCTIONALIZED WITHIN THE SCOPE OF SUSTAINABLE DEVELOPMENT
Assist. Prof. Zekiye Aslıhan Öztürk	Tekirdağ Namık Kemal University, Turkey	THE GUTAI INFLUENCE ON THE PIONEERING ART MOVEMENTS OF THE 1960s
Assoc. Prof. Dr. Nazan DÜZ Kardelen ÖZDEMİR	Uşak University, Turkey	CONTEMPORARY ART, DESIGN STUDIES AND HUMAN
Fatmagül Saklavcı	Sivas Cumhuriyet University, Turkey	KNIFE ART IN SİVAS AND AN EVALUATION OF MUSTAFA ARGUT'S WORK
Hilal Tuğba Örmecioğlu	Akdeniz University, Turkey	THE IMPORTANCE OF STRUCTURE IN ARCHITECTURE AND AN EVALUATION THROUGH ENGINEER-ARCHITECTS
Hilal Tuğba Örmecioğlu	Akdeniz University, Turkey	THE ROLE OF STRUCTURE IN ARCHITECTURE EDUCATION AND AN APPLIED EDUCATION MODEL
Aygun AMANELIYEVA	Institute of Linguistics of the National Academy Sciences of Azerbaijan	QUANTIFIERS AND DETERMINERS IN ENGLISH: TYPES AND THEORIES

(All speakers required to be connected to the session 10 min before the session starts)

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20.09.2021 | SESSION-2 | HALL-5

Beirut Local Time: **13^{00}-15^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Dr. Orhan GÖKTEPE

Author	Affiliation	Presentation title
Juanita Goicovici	University Babeș-Bolyai of Cluj-Napoca, Romania	ASSESSMENT OF ALTERNATIVE DISPUTE RESOLUTION BETWEEN PROFESSIONALS AND CONSUMERS: ARE ADR MECHANISMS ADEQUATELY TAILORED?
Aşkın KARADUMAN	Ankara Hacı Bayram Veli University, Turkey	AN OVERVIEW OF THE DEVELOPMENT OF HEALTH POLICIES IN TURKEY FROM THE REPUBLICAN PERIOD TO THE PRESENT
Abdulkerim Eroğlu	Dokuz Eylül University, Turkey	EFFECTS OF INTERNET TECHNOLOGY ON THE POWER OF THE PURSE
Assoc. Prof. Dr. Aykut EKİYOR **Lect. Meryem HAKSES** **Lect. Gülhan GÖK**	Ankara Hacı Bayram Veli University, Turkey Selcuk University, Turkey Amasya University, Turkey	ANALYSIS OF THE PREFERRED SHOPPING METHOD BEFORE AND DURING THE PANDEMIC
Assoc. Prof. Dr. Aykut EKİYOR **Menekşe UZUNÇAKMAK** **Lect. Gülhan GÖK**	Ankara Hacı Bayram Veli University, Turkey Ministry of National Defence, Turkey Amasya University, Turkey	THE EFFECT OF QUALITY PERCEPTION ON CUSTOMER SATISFACTION IN CITY HOSPITAL
M.K.GANESHAN **Dr. C.VETHIRAJAN**	Alagappa University, India	IMPACT OF INDUSTRY 4.0 AND DIGITALIZATION OF MODERN INFORMATION TECHNOLOGY
Shehu Umar Sa'id **Riaz Ahmed** **Abdullahi Bala Alhaji**	Federal Polytechnic, Bauchi, Nigeria University of Turbat, Balochistan Pakistan Umaru Ali Shinkafi Polytechnic Sokoto State, Nigeria	THE ROLE OF ENVIRONMENTAL MANAGEMENT ACCOUNTING FOR ENHANCING ORGANIZATIONAL PERFORMANCE
Tolga Özkaptan	Ankara University, Turkey	MIDDLE EAST – LATIN AMERICA RELATIONS ON THE BASIS OF ECONOMY
Dr. Orhan GÖKTEPE	Istanbul Yeni Yuzyil University, Turkey	VALIDITY OF THE PROHIBITION ON THE USE OF FORCE IN INTERNATIONAL RELATIONS
Sude ÖZYURT **Assoc. Prof. Dr. Hüseyin ÇAVUŞOĞLU**	Zonguldak Bülent Ecevit University, Turkey	Social Inclusion and Social State Relations

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20.09.2021 | SESSION-3 | HALL-1

Beirut Local Time: **16^{00}-18^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Asst. Prof. Gheorghe BORDENIUC

Author	Affiliation	Presentation title
Assist. Prof. K.R.Padma K.R.Don	Sri Padmavati Mahila Visvavidyalayam (Women's) University, India	DIVERSE MEDICINAL PROPERTIES OF PLANT EMILIA SONCHIFOLIA (LINN.) DC
Ayşe Gül YAVAŞ AYHAN Fatma ÖZ	Ankara University, Turkey Lokman Hekim University, Turkey	INVESTIGATION OF NURSES' PERSPECTIVES TOWARDS NURSING RELATIONSHIP
Büşra Şeker Aynur Emine Çiçekcibaşı Gülay Açar Demet Aydoğdu	Necmettin Erbakan University, Turkey	MORPHOMETRIC AND CLINICAL EVALUATION OF FORAMEN SPHENOPALATINA ON COMPUTED TOMOGRAPHY IMAGES
Dr. Tuba Karabey Dr. Mehtap Aras	Tokat Gaziosmanpaşa University, Turkey	HEALTH ETHICS IN DISASTER MANAGEMENT: A CURRENT OVERVIEW
Prof. Dr. Victor LACUSTA Prof. Dr. Valeriu FALA Asst. Prof. Gheorghe BORDENIUC	State University of Medicine and Pharmacy, Republic of Moldova	SCREENING TECHNIQUE FOR MASTICATORY MUSCLE DISORDERS
Edanur Maraş Ahter Şanal Çıkman	Recep Tayyip Erdogan University, Turkey	MANAGEMENT OF FRACTURED INSTRUMENTS IN ENDODONTIC TREATMENT: CASE REPORT
Betül Yalçın Özge Göktepe Münevver Baran Menekşe Ülger Fazile Cantürk Tan Arzu Hanım Yay	Erciyes University, Turkey	EFFECT OF QUERSETIN ON COLON DAMAGE CAUSED BY RADIATION
Rabar Mohammed Hussein Bulent Sen	Fırat University, Turkey	SEASONAL CHANGES IN CONCENTRATIONS OF ORGANIC MATTER AND PLANT NUTRIENTS IN ULUOVA REGION OF KEBAN DAM LAKE
Gözde Öztan	Istanbul University, Turkey	THREE-DIMENSIONAL PROTEIN MODELING FOR COVID-19-ASSOCIATED SARS-COV-2 SPIKE PROTEIN WITH SWISS MODEL
Prof. Dr. Adil Geybulla	Azerbaijan Medical University	BLOOD REINFUSION PRACTISE IN THE PATRIOTIC WAR OF AZERBAIJAN (1993-2020)

(All speakers required to be connected to the session 10 min before the session starts)

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20.09.2021 | SESSION-3 | HALL-2

Beirut Local Time: **16^{00}-18^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Assoc. Prof. Dr. Handan ÖZCAN

Author	Affiliation	Presentation title
Mehmet Korkmaz **Tuğrul ERGÜN**	S.B. Hatay Kırıkhan Devlet Hastanesi, Turkey İstinye University, Turkey	WHAT SHOULD OUR SURGICAL TREATMENT PREFERENCE BE FOR PEDIATRIC LOWER END FRACTURES OF THE TIBIA? PROSPECTIVE COMPARISON OF 3 DIFFERENT SURGICAL TECHNIQUES
Nihan EROĞLU **Fehmiye GÜMÜŞ** **Başak BOZTOK ÖZGERMEN**	Aksaray University, Turkey	SURGICAL RECONSTRUCTION OF MULTIPLE FRACTURES IN THE CARAPACE OF A MEDITERRANEAN SPUR-THIGHED TORTOISE (TESTUDO GRAECA LINNAEUS 1758)
Ebru KUMRU **Assoc. Prof. Dr. Handan ÖZCAN**	Manisa Soma State Hospital, Turkey Health Sciences University, Turkey	COMPARISON OF HEALTHY LIFESTYLE BEHAVIORS IN PREECLAMPTIC PREGNANCY WITH HEALTHY PREGNANCY
Ebru KUMRU **Assoc. Prof. Dr. Handan ÖZCAN**	Manisa Soma Devlet Hastanesi, Turkey Health Sciences University, Turkey	A COMPARISON OF HEALTHY LIFESTYLE BEHAVIORS AND DEPRESSION IN PRE-ECLAMPSY PREGNANCY
Omer Furkan DURAN **Sercin OZLEM CALISKAN**	Usak University, Turkey	MALACHITE GREEN-BASED PHOTODYNAMIC THERAPY IN HL-60 CELLS
Şeyda DEMİR ÖZERDİNÇ **Mukadder Mollaoğlu** **Yasemin Boy**	Sivas Cumhuriyet University, Turkey Tokat Gazi Osman Paşa University, Turkey	THE CARE OF PATIENT DIAGNOSED WITH COVID -19 ACCORDING TO GORDON'S FUNCTIONAL HEALTH PATTERNS MODEL: CASE REPORT
Shabnam Farzali **Naim Saglam**	Firat University, Turkey	MOLECULAR CHARACTERIZATION OF LEECH SPECIES IN AZERBAIJAN (LENKERAN–ASTARA REGION) ON MT DNA BY CYTOCHROME C OXIDASE SUBUNIT I (COX1) AND MORPHOLOGIC CHARACTERISTICS
Ruixue Zhang **Dylan Singh** **Fereydoun D. Parsa, MD, FACS**	University of Hawaii, USA	EARLY SIGNS OF BREAST IMPLANT INFECTION
Emine KINIK **Assoc. Prof. Dr. Handan ÖZCAN**	Health Sciences University, Turkey	THE COMPARISON OF HEALTH PRACTICES IN PLANNED AND UNPLANNED PREGNANCY
Emine KINIK **Assoc. Prof. Dr. Handan ÖZCAN**	Health Sciences University, Turkey	THE ANXIETY OF WOMEN REGARDING PREGNANCY PLANNING DURING COVID: TWO CASE REPORTS

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20.09.2021 | SESSION-3 | HALL-3

Beirut Local Time: **16^{00}-18^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Elvin PAŞAYEV

Author	Affiliation	Presentation title
Elvin PAŞAYEV	Azerbaijan State University of Economics	DEPENDENCE OF FINANCIAL RESOURCES ON THE VOLUME AND PRICE OF OIL PRODUCTION IN THE CASE OF AZERBAIJAN
Elvin PAŞAYEV	Azerbaijan State University of Economics	ANALYSIS OF THE AGRICULTURAL SECTOR AND PROSPECTS THAT MAY ARISE THROUGH THE EFFICIENT USE OF FINANCIAL RESOURCES FOR AZERBAIJAN
Assoc. Prof. Dr. Gökhan KERSE **Evrim TARTAN SELÇUK**	Karamanoğlu Mehmetbey University, Turkey	THE RELATIONSHIP BETWEEN IDENTIFICATION WITH LEADER, ORGANIZATIONAL ALIENATION AND IN-ROLE PERFORMANCE: A MEDIATED MODEL
Müge MANGA **Mehmet Akif DESTEK**	Erzincan Binali Yıldırım University, Turkey Gaziantep University, Turkey	FINANCIAL DEVELOPMENT AND INCOME DISTRIBUTION
Müge MANGA **Mehmet Akif DESTEK**	Erzincan Binali Yıldırım University, Turkey Gaziantep University, Turkey	THE RELATIONSHIP BETWEEN INCOME INEQUALITY AND ENERGY POVERTY
Dr. Eugene Hakizimana	Tecnológico de Estudios Superiores de Ecatepec, México	DEVELOPMENT AID SYSTEM IN THE CONTEXT OF COLLECTIVE ACTION. A COMPARATIVE ANALYSIS OF AMARTYA SEN AND E. OSTROM
Emin Alirzayev	Ministry of Labor and Social Protection of Population of the Republic of Azerbaijan	THEORETICAL FUNDAMENTALS AND CONTEMPORARY PROBLEMS IN DEVELOPMENT OF SOCIAL PROTECTION SYSTEMS
Natiq Huseynov	UNEC Economy Baku Azerbaijan	ASSESING THE ECONONOMIC PRODUCTIVITY OF Aİ IN BUSINESS
Ayu Larasati **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	Efforts of the Civil Service Police Unit In the Arrangement and Development of Street Vendors (PKL) in Langkat Regency (Case Study on Sudirman Street, Tanjung Pura District)
Frieda ARIFAH **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	INNOVATIVE, UNIQUE, AND HAVE BUSINESS OPPORTUNITIES THROUGH THE ART OF MOSS CULTIVATION: KOKEDAMA

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20.09.2021 | SESSION-3 | HALL-4

Beirut Local Time: **16^{00}-18^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Dr. Harun KAPTANER

Author	Affiliation	Presentation title
Dr. Harun KAPTANER	Pamukkale University, Turkey	THE FAILURE TO CREATE THE CAPITALIST BOURGEOIS CLASS IN THE SOCIO OF AHI
İsmail BAKAN **Nihal ALOĞLU** **Burcu ERŞAHAN**	Kahramanmaraş Sütçü İmam University, Turkey	A SOCIAL EVALUATION REGARDING OUR SYRIAN GUESTS UNDER TEMPORARY PROTECTION: THE CASE OF KAHRAMANMARAŞ PROVINCE
Seda Sabah **Aydan Ermiş** **Soner Çankaya**	On Dokuz Mayıs Univeristy, Turkey	ANALYSIS OF RESPECT FOR OPPOSITE APPROACH AND SELF-CONTROL LEVELS OF FOOTBALL SUPPORTERS
Aydan Ermiş **Seda Sabah** **Soner Çankaya**	On Dokuz Mayıs Univeristy, Turkey	ANALYSIS OF DIGITAL GAME ADDICTION AWARENESS LEVELS OF SEDENTARY INDIVIDUALS AND INDIVIDUALS ENGAGED IN SPORTS GROUPED AS GENERATION X, Y AND Z
Saime Uyar	MEB, Malatya, Turkey	BEING WOMAN IN THE GEOGRAPHY OF MIDDLE EAST: EXAMPLE OF AFGHANISTAN
Ahmet Büyükşalvarcı **Zekeriya Yetiş** **Nilüfer Arslan**	Necmettin Erbakan University, Turkey	A STUDY TO MEASURE THE PROFESSIONAL ANXIETY OF TOURIST GUIDES IN THE SCOPE OF TECHNOLOGICAL DEVELOPMENTS
Sude ÖZYURT **Assoc. Prof. Dr. Hüseyin ÇAVUŞOĞLU**	Zonguldak Bülent Ecevit University, Turkey	SOCIAL INCLUSION AND SOCIAL STATE RELATIONS
Konul Ahmadova	Baku State University, Azerbaijan	MODERATION AND STRENGTHENING OF MULTICULTURAL VALUES AS A PART OF THE STATE POLICY OF AZERBAIJAN
Assoc. Prof. Dr. Supardal, M.Si	STPMD "APMD" Yogyakarta, Indonesia	THE ROLES OF VILLAGE VOLUNTEERS IN OVERCOMING COVID-19 PANDEMIC IN SRIHARJO VILLAGE IN THE SPECIAL REGION OF YOGYAKARTA
Assist. Prof. Dr.Turan ŞENER **Hülya BARLAK**	Institute of Social Sciences, Turkey	THE EFFECT OF SOCIAL MEDIA IN SOCIAL MOVEMENTS: ANALYSIS OF THE ARAB SPRING

(All speakers required to be connected to the session 10 min before the session starts)

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20.09.2021 | SESSION-3 | HALL-5

Beirut Local Time: **16^{00}-18^{30}**

Meeting ID: **891 4504 9887** | Passcode: **999863**

MODERATOR – Assist. Prof. Mushtaq. A. Lone

Author	Affiliation	Presentation title
Raad N. Butris	University of Duhok, Iraq	EXISTENCE AND UNIQUENESS SOLUTION FOR NONLINEAR SYSTEM OF FRACTIONAL INTEGRO-DIFFERENTIAL EQUATION OF VOLTERRA TYPE
Begüm Çığşar **Deniz Ünal**	Çukurova University, Turkey	A COMPARISON OF GENETIC ALGORITHM AND LEAST SQUARES ERROR METHODS FOR L-MMH MODEL VIA GLUCOSE DATA
Hulusi Şahinbaş **Gözde Bayazit Sekitmen** **Semra İde**	Hacettepe University, Turkey	NANOSCOPIC INVESTIGATION OF THE INTERFACE STRUCTURES FORMED BY POLYMER-BASED ADHESIVES USED IN THE SHOE INDUSTRY
Musa Adekunle AYANWALE	University of Johannesburg, South Africa	SCORE EQUATING OF MATHEMATICS MULTIPLE-CHOICE TEST ITEMS: PERSPECTIVE FROM HAEBARA AND STOCKING-LORD METHODS OF ITEM RESPONSE THEORY MEASUREMENT FRAMEWORK
Assist. Prof. Mushtaq. A. Lone **Prof. S. A. Mir** **Rafiq Lone** **Assist. Prof. Omar F. Khan**	SKUAST –K, J&K India Islamia collage of Science and Technology J&K India	OPTIMAL ALLOCATION IN STRATIFIED SAMPLING DESIGN BY FORMULATING DIFFERENT MATHEMATICAL PROGRAMMING PROBLEMS
Hamidov Elshad Hamid oglu	Azerbaijan State Pedagogical University	BOUNDARY VALUE PROBLEMS FOR OPERATOR-DIFFERENTIAL PARABOLIC EQUATIONS OF THE SECOND ORDER
Vakeel A. Khan **Zahid Rahman**	Aligarh Muslim University, India	ON JORDAN TOTIENT OPERATOR
Haseeb ur Rehman **Fakhar Mustafa**	Punjab Bait-ul-Maal, Government of the Punjab, Pakistan COMSATS University Islamabad, Pakistan	ESTIMATION OF CASE FATALITY RATES AND MACHINE LEARNING ALGORITHM BASED PREDICTION OF COVID-19 CASES IN SAARC
Assist. Prof. Dr. Abdul Qadeer Khan	University of Azad Jammu &Kashmir, Pakistan	BIFURCATIONS OF A TWO-DIMENSIONAL DISCRETE TIME PLANT-HERBIVORE SYSTEM
Anbar Naurah FIRDAUS **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	BUYING AND SELLING LAW IN ISLAM

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20.09.2021 | SESSION-3 | HALL-6

Beirut Local Time: **16^{00}-18^{30}**

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MODERATOR – Hendri Hermawan ADiNUGRAHA

Author	Affiliation	Presentation title
Duwi Utami **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	The Influence of Entrepreneurial Knowledge and Self-efficacy on Entrepreneurial Interest
Khoirunnazilah **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	IS-LM ANALYSIS: IS-LM MODEL AND IS_LM ISLAMIC PERSPECTIVE
Mila Mardiana **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	ANALYSIS OF CATFISH TRADE ZAKAT
Umi Puji HARTINI **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	MARKETING STRATEGY OF SENGON WOOD LOAD BASED ON SWOT ANALYSIS (CASE STUDY ON CV. MAHIDJA KARYA PANINGGARAN, PEKALONGAN REGENCY)
Meilita UTAMI **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	UTILIZATION OF SOSIAL MEDIA AS A PUBLIC RELATION STRATEGY FOR BASA DEPARTEMENT STORES PEMALANG
Anggita Nanda Oktaviani **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	THE IMPACT OF AGRO-TOURISM DEVELOPMENT ON THE ECONOMY OF PENGGARIT VILLAGE, TAMAN DISTRICT, PEMALANG
Nurwanti **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	THE ROLE OF THE CENTRAL BANK IN THE ECONOMY AND THE INDEPENDENCE OF THE CENTRAL BANK
Tania Putri NOVITA SARI **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	BRAND MARKETING STRATEGY FOR THE HOME PRODUCTION OF GOYOR WOVEN FABRIC INDUSTRY IN THE PERSPECTIVE OF ISLAMIC ECONOMICS IN THE VILLAGE OF WANAREJAN PEMALANG CITY
Frieda ARIFAH **Hendri Hermawan ADİNUGRAHA**	IAIN Pekalongan, Faculty of Islamic Economics and Business, Department of Islamic Economics	INNOVATIVE, UNIQUE, AND HAVE BUSINESS OPPORTUNITIES THROUGH THE ART OF MOSS CULTIVATION : KOKEDAMA

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PERFORMANCE OF ALUMINUM SLAG AND CLASS C FLY ASH-BASED GEOPOLYMER CONCRETES UPON SEAWATER EXPOSURE

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Abstract
Waste materials and by-products formed at the industrial level have accelerated the search for their disposal. Geopolymer technology is one of the most suitable solution methods for this situation and it directs more attention to itself as time progresses. The determining factor in whether the binder material to be used in the production of geopolymer has pozzolanic potential is the ratio of amorphous Al_2O_3 and SiO_2 components. With the production of geopolymer, the usage area of new materials expands, while at the same time, a solution is found for the disposal of industrial wastes and environmental pollution problems are solved. In this study, the usability of different waste materials in the production of geopolymer concrete was investigated. Class C fly ash (CFA) obtained from Afşin-Elbistan Thermal Power Plant, the largest coal-fired power plant in Turkey, and aluminum slag (AS) obtained as a result of aluminum production were substituted (100% CFA-0% AS, 97.5% CFA-2.5% AS, 95% CFA-5% AS, 92.5% CFA-7.5% AS, 90% CFA-10% AS) and used in the production of geopolymer concrete. 28 and 90 days compressive strength and ultrasonic pulse velocity (UPV) results of the samples were examined. In addition, after 90 days, the geopolymer concretes were exposed to seawater for 1 and 6 months. Before the seawater test, the geopolymer concretes were kept at 105^{o}C for 1 day. The compressive strength, UPV, and weight changes of the samples were examined as a result of the seawater effect, and also a visual examination was made after 6 months of seawater effect. When aluminum slag was used, lower strength values were obtained due to the decrease in the SiO_2/Al_2O_3 ratio, which was very important for geopolymerization. As the percentage of Class C fly ash increased, the strength and UPV values increased. Especially when 95% CFA-5% AS was used, results satisfying the compressive strength criterion (31 MPa) for residential concrete samples were obtained. With the effect of seawater, an increase was observed in strength, UPV, and weight values at the end of 1 month. In this case, keeping it in the oven before the test and ensuring the continuation of C-S-H gel with the effect of seawater and chloride were effective. Afterward, there were decreases in values due to the deterioration effect. However, while it was seen that the geopolymer concrete samples provided a significant resistance against seawater, it was possible to produce an environmentally friendly geopolymer concrete product.

Keywords: Geopolymer, aluminum slag, class C fly ash, seawater effect

Introduction

Ordinary Portland Cement concrete is widely used and is the most important material in the construction sector worldwide today [1]. The most important advantages of these concretes are low price, easy supply, ability to give the desired shape, and durability [1-2]. Despite its important advantages, the increase in the release of CO_2 into the atmosphere with the effect of increasing cement production over time creates negative effects on the environment and triggers the problem of global warming. The increase in the release of CO_2 into the atmosphere leads to an increase in the greenhouse effect. The amount of carbon dioxide released by the calcination of limestone and the combustion of fossil fuels during the production of cement is around one ton for each ton of cement produced. While the worldwide concrete consumption is estimated to be around 10 billion tons in a year, it is obvious that this situation will increase with the increasing housing need in the coming years. In addition, low chemical resistance of traditional concretes to salts and acid effects and low thermal and fire resistance at high temperatures accelerated the search for alternative materials [3-4]. Although Portland cement dominates the construction industry, geopolymer is an emerging binder that has the potential to replace this situation. Compared to conventional Portland Cement, geopolymers have lower CO_2 emissions and energy consumption, while earlier hardening and improved mechanical and durability properties are also observed. Geopolymer is an environmentally friendly material with a three-dimensional network structure formed as a result of the reaction of different pozzolanic materials (metakaolin, slag, fly ash, and red mud, etc.) with alkali activators. With these advantages, geopolymer has the potential to be used in many different areas such as industry, transportation, agriculture, oil well cement, mining, waste management (solidification of toxic metals and radioactive waste management) [5].

Slag is a by-product that is formed by the melting of metals or metal-containing ores, which contains lighter oxides and silicates than metal and can accumulate on the surface due to different densities. The slags are produced at very high rates by the pyrometallurgical process and constitute a large waste source when they are not recycled or used by appropriate methods. Today, the continuous increase in industrialization has led to the search for storage and disposal solutions for metallurgical slags. Disposal and landfill cost also increase. Despite these situations, the storage of waste materials also causes air, water, and soil pollution. This indirectly affects plant growth and human and animal health [6]. The mineral structures, compositions, and cooling rates of the slags significantly affect their use. The slags obtained as a result of different metallurgical processes can be used in different ways according to their characteristics. The most important and most widely used type of slag is granulated blast furnace slag. Blast furnace slag, which is a by-product obtained as a result of the combustion process of the cast iron industry, enables geopolymerization to be achieved under room conditions due to the high calcium content in it. Blast furnace slag with high hydraulic activity brings significant advantages in geopolymer production [7]. Along with this slag, it is important to evaluate the different types of slag. Aluminum slag is a by-product produced from aluminum ore and scrap. Aluminum slag contains high levels of aluminum oxide [8]. Aluminum slag poses a danger to groundwater as it is a toxic industrial waste and is mostly disposed of in open landfills [9]. In this respect, the usability of this waste material is important for geopolymer concrete production.

In the production of geopolymers, Class F fly ash is used more intensively than Class C fly ash type [10-11]. Amorphous inorganic polymers are formed as a result of the reaction of fly ash with alkaline activators. In the case of using different fly ash types, the geopolymer binder formed due to the different chemical composition also shows different properties. Class C fly ash contains less silicon oxide and aluminum oxide than Class F fly ash, and it can be set faster due to its higher calcium oxide content. These conditions lead to less preference. The most

important factors affecting the conditions in geopolymer production are curing conditions, alkali activator solution concentration, and mineralogical and chemical composition of fly ash. The slow reaction of fly ash encourages the curing condition to be realized as a high-temperature application. In this way, it is possible to obtain a more compact structure by increasing the kinetic energy and reaction degree of the geopolymer [12].

Geopolymer concrete, which has significant advantages over Traditional Portland Cement, is a sustainable environmentally friendly material. Along with this situation, the decrease in energy consumption is also an important advantage. Evaluation of different waste materials in geopolymer production is valuable in this regard. It is important to use Class C fly ash, which is thermal power plant waste, and aluminum slag produced from aluminum ore and scrap as binders. In this study, 100% Class C fly ash was used as the control sample, while aluminum slag was substituted in four different percentages (2.5%, 5%, 7.5%, 10%) in the other four mixtures. While the 28 and 90-day UPV and compressive strength results of the produced samples were found, the seawater effect was also applied to the concrete samples for up to 6 months after 90 days. UPV, compressive strength and weight change after seawater effect were found while the visual inspection was also done.

Material and Methods

Two different binder materials were used for geopolymer concrete production in this study. Class C fly ash obtained from Afşin-Elbistan Thermal Power Plant was used as the main binder material. The specific gravity and specific surface area of Class C fly ash were 2.7 and 2900 cm^2/g, respectively. $SiO_2+Al_2O_3+Fe_2O_3$ value was below 50% and CaO>10%, so it conformed to Class C (high lime) fly ash class. The other material used as a substitute for fly ash was aluminum slag. The aluminum slag used was obtained from the secondary aluminum recycling plant. The chemical compositions are shown in Table 1. A mixture of sodium silicate and sodium hydroxide (14M) was used as an alkali activator. The crushed limestone aggregate was used as coarse aggregate and had a maximum size of 16 mm. The water absorption and specific gravity of the coarse aggregate were 0.31% and 2.70, respectively. River sand with a water absorption ratio of 1.59% and a specific gravity of 2.61 was also used. The fineness modulus of the aggregate mixture was 4.09 and the volume percentages were kept constant. A suitable mixture classification has been prepared for the aggregate. In addition, MasterGlenium 51 superplasticizer was used to increase the fluidity of the mixture.

Tablo 1. Chemical composition for Class C fly ash and aluminum slag (%)

Chemical composition, %	SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	K_2O	SO_3	Na_2O	L.O.I.
Aluminum slag	12.32	65.46	2.60	6.28	6.45	0.68	2.21	2.19	1.81
Class C fly ash	18.95	7.53	3.82	51.29	1.58	1.51	12.06	0.32	2.94

The 14M sodium hydroxide used in the mixture was prepared one day before the mixture and mixed with sodium hydroxide 2 hours before the mixture. While preparing the mixture, a primarily dry mix consisting of aggregate and binders was made. The dry mixture was mixed in the concrete mixer for 2 minutes. After the superplasticizer added alkali activator was poured into the concrete mixer, the mixture was continued for three more minutes. Then, the resulting mixture was placed in cube molds (150mmx150mmx150mm) and vibration was applied. After

the samples were kept in the mold at room conditions for 24 hours, they were removed from the mold and heat cured at 80°C for 2 days. It was then kept in room condition until the test day. 28 and 90-day UPV and compressive strength results were found. After 90 days were completed, the seawater effect was applied to the samples for 1 and 6 months. In order to increase the effect of seawater, the samples were kept at 105°C for 1 day before the test. After the samples were placed in the storage box, seawater was added. Seawater was put as 4 units against 1 unit sample volume. Changes in weight, UPV, and compressive strength of the samples at the end of 1 and 6 months were examined. In addition, a visual examination of the samples was made at the end of 6 months. Five different series were prepared for the mixture and aluminum slag was replaced with Class C fly ash at 4 different percentages (2.5%, 5%, 7.5%, 10%). Details on the mixture of 5 different series produced are given in Table 2.

Tablo 2. Mixture proportions of series

Component (%)	Class C Fly Ash	Aluminum Slag
AS0	100	-
AS2.5	97.5	2.5
AS5	95	5
AS7.5	92.5	7.5
AS10	90	10

Result and Discussion

1 month and 6 months compressive strength and UPV results obtained when applying seawater effect to 5 geopolymer concrete series produced for this research are shown in Figure 1-2, along with 28 and 90 days results. The changes in sample weights with the application of the seawater effect are shown in Figure 3. Alumina, silica, and calcium content played an important role in geopolymerization. While two different mechanisms such as geopolymerization and hydration formed in geopolymer concrete produced with Class C fly ash with high calcium content, the curing regime was also effective in this situation. The results of these situations also affected the strength properties. The low silica and alumina ratio of fly ash caused a lower rate of geopolymerization. In addition, high calcium content also negatively affected geopolymerization. While the calcium content slowed down the geopolymerization, it accelerated the formation of CSH, CASH, or the two together. However, with its high calcium content, additional nucleation zones that allowed the precipitation of dissolved species in the fly ash accelerated the hardening process of the concrete. These conditions, which increased the calcium content, led to a decrease in free water, resulting in a decrease in workability [13-15]. The binder material used as a substitute, aluminum slag, was a toxic industrial waste and posed a danger to groundwater. Four different percentages were evaluated for use as a substitute. The majority of different types of slag contained a high proportion of Ca. Especially, blast furnace slag formed calcium-(sodium)-alkali-silicatehydrate [C-(N)-A-S-H] with alkali activation due to its high Ca content. The situation was different in aluminum slag, and since the Ca content was low, classical N-A-S-H phase formation was more observed. SiO_2/Al_2O_3 ratio was a very important factor for geopolymerization [16]. Since the content of aluminum slag was mainly aluminum, it led to a decrease in this ratio [17-18]. A decrease in this ratio also led to a slowdown in the reaction of geopolymerization. The rate of 5% was decisive in this regard. In the case of using aluminum slag at this percentage, compressive strength of 31.59 MPa was obtained at the end of 28 days, and it was observed that the concrete sample used for residential purposes provided the required strength (31 MPa) according to ACI 318 and 322 codes [16]. Thus, while a very dangerous toxic material was evaluated in terms of sustainability,

the necessary strength conditions were also provided. If it was used at higher percentages, the strength values decreased more. In this study, 14M sodium hydroxide solution was used, which facilitated the dissolution of silicon ion (Si^{4+}) and aluminum ion (Al^{3+}), resulting in slightly more geopolymerization [16]. When the 28 and 90-day results of the samples were compared, it was observed that there was an increase with the increasing day, but this value was found to be a low increase. The reason for this situation was that most of the geopolymerization process completed in the first days due to the application of heat curing. Due to this situation, the increase was limited [19]. When the UPV results were analyzed, it was seen that the results showed parallelism with the compressive strength results [20]. The weakening of the structure with the increase of aluminum slag caused a decrease in UPV results due to an increase of voids [16]. The 28 and 90-day compressive strength results of sample AS0 were 35.67 MPa and 38.75 MPa, respectively, while the UPV results were 3875 m/s and 3992 m/s, respectively. The 28 and 90-day compressive strength results of sample AS5 were 31.59 MPa and 32.88 MPa, respectively, while the UPV results were 3821 m/s and 3917 m/s, respectively.

With the effect of seawater, the results on weight, compressive strength, and UPV firstly increased, then decreased. Chloride in seawater was effective in increasing the results of geopolymer concrete samples at the end of 1 month. The formation of NaCl, $MgCl_2$, $CaCl_2$ products increased with the effect of chloride, and this caused the formation of more C-S-H gels, mainly by creating an accelerating effect on tricalcium silicates (C_3S). In addition, seawater increased the UPV and weight values by reducing the voids in the geopolymer [21-22]. As time progressed, this situation reversed. Over time, water and $MgCl_2$, NaCl, Na_2SO_4, and $MgSO_4$ salts started to have a negative effect. While alkalis migrated from the sample to the surrounding seawater, salts as ions also diffused from the seawater to the samples. For example, the Mg^{2+} ion led to the separation of the main binding phases. In this case, the magnesium aluminate silicate hydrate (M-A-S-H) type replaced the sodium aluminate silicate hydrate (N-A-S-H) type. These conditions increased the formation of micro-cracks. Thus, after 6 months, reductions in results were observed [23]. Despite this effect, changes in the external appearance were limited. The appearance of the 5 series at the end of the 6-month seawater effect is shown in Figure 4. With the increase in the use of aluminum slag, gaps and cracks began to appear on the sample surfaces. This situation was more pronounced in 10% aluminum slag. However, it was observed that the geopolymer samples still remained stable [24]. The compressive strength results of sample AS0 after 1 and 6 months of seawater effect were 43.32 MPa and 28.44 MPa, respectively, while the UPV results were 4078 m/s and 3252 m/s, respectively. On the other hand, the compressive strength results of sample AS5 after 1 and 6 months of seawater effect were 36.23 MPa and 21.34 MPa, respectively, while the UPV results were 3985 m/s and 3174 m/s, respectively. The weight change for sample AS0 was 2.34% and 1.78% at 1 and 6 months, respectively, while for sample AS5 it was 2.95% and 2.26%, respectively.

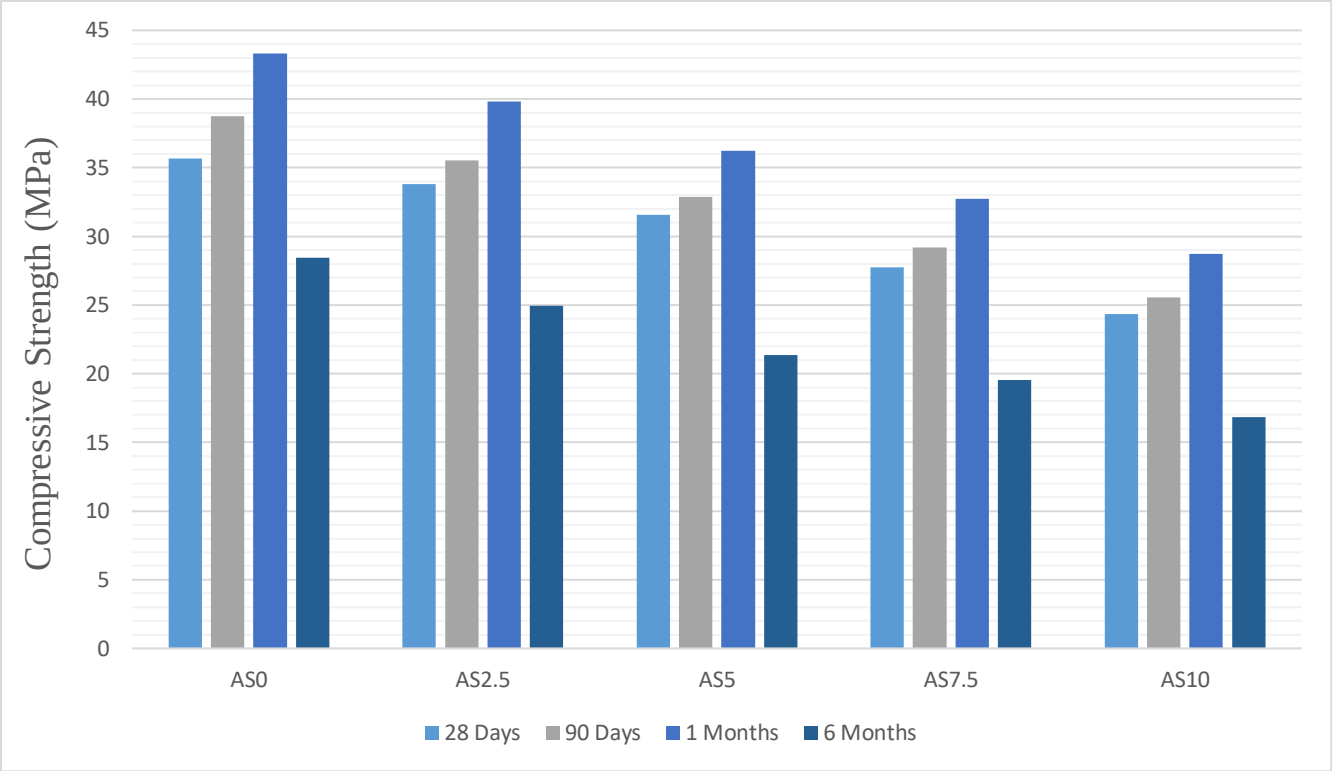


Figure 1. Compressive strengths of geopolymer concrete



Figure 2. UPV results of geopolymer concrete

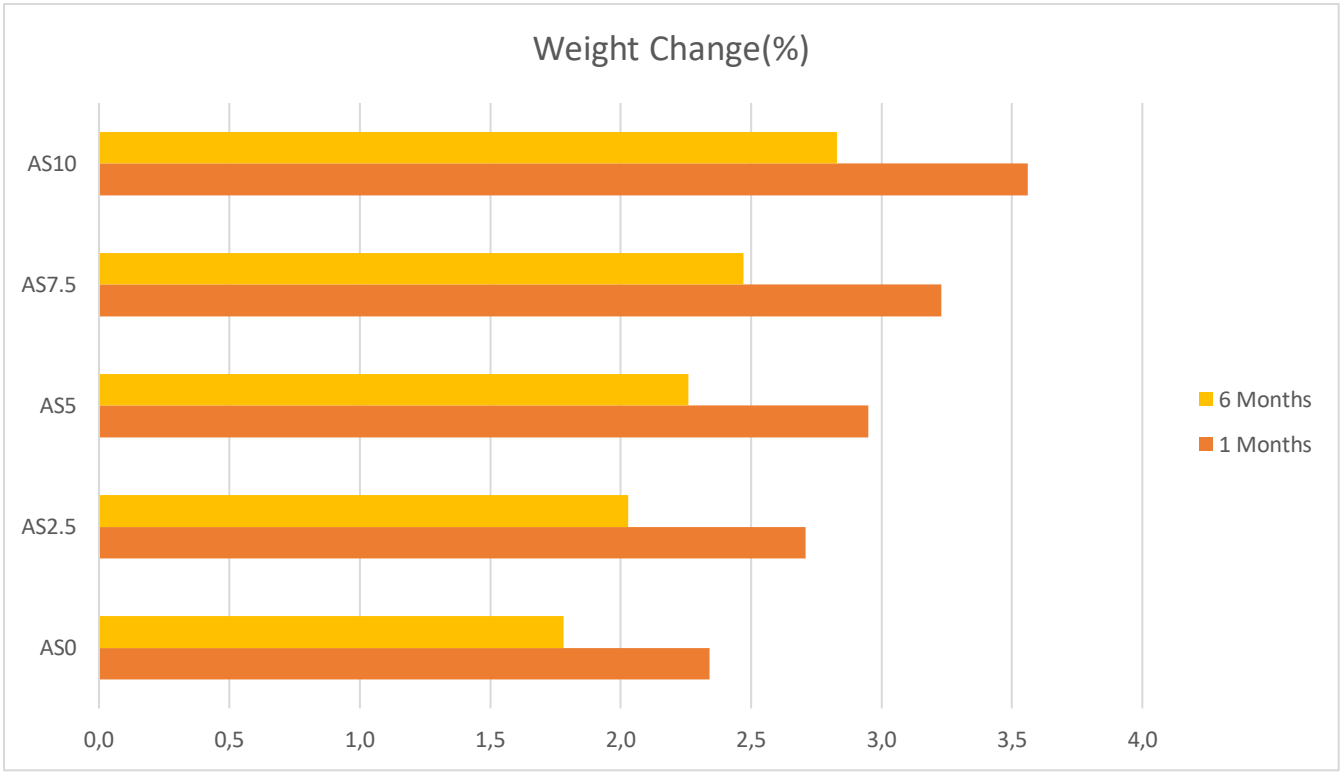


Figure 3. Weight-change results **of** geopolymer concrete



Figure 4. Visual inspection after the seawater effect

Conclusions

With this research, the mechanical performance of Class C fly ash-based geopolymer concrete produced by replacing aluminum slag against seawater was examined and the following results were found.

• While higher C-S-H gel formation was observed in Class C fly ash-based geopolymer concretes with high calcium content compared to Class F fly ash-based geopolymer concretes, less geopolymerization occurred. This was also due to the lower silica and alumina in Class C fly ash. However, after 28 and 90 days, 35.67 MPa and 38.75 MPa were obtained, respectively, in Class C fly ash-based geopolymer concrete with heat curing, and results above 31 MPa, which is a critical value, were obtained.

• Since aluminum slag was a hazardous toxic industrial waste and created disposal and storage costs if not used, it was important to evaluate it in geopolymer production. Although it contained a low amount of Ca, the high aluminum content slowed down the reaction by causing a decrease in SiO_2/Al_2O_3, which played a very important role in geopolymerization. This caused a decrease in strength and UPV values. Despite this situation, obtaining a value above the required strength (31 MPa) of the concrete sample used for residential purposes, in case of substitution up to 5%, showed that it can be used together with Class C fly ash as waste material.

• In the case of applying the seawater effect, the ranking of the UPV and compressive strength results was similar to the 90-day results. At the end of the 1 month, NaCl, $MgCl_2$, $CaCl_2$ products were formed more by the effect of chloride, and more C-S-H gel formation was observed with the accelerating effect on tricalcium silicates (C_3S). However, seawater filled the gaps and created a denser structure. This led to an increase in strength, UPV, and weight values. Over time, this had the opposite effect. Chloride weakened the structure by causing the separation of the main binder phases in the sodium aluminate silicate hydrate (N-A-S-H) structure due to reactions over time. Micro-cracks caused by these conditions reduced the results. Despite these conditions, geopolymer concrete samples showed significant resistance to seawater against the effects.

Acknowledgments

This work was supported by the research fund of the Yildiz Technical University, the authors would like to express their sincere gratitude to the scientific research coordination unit for their financial support to the project (Project number: FAP-2021-4020).

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