

Conference Program

Second National Conference on Physics and its Applications

General Schedule

Time	Activity
08:30–09:00	Registration of Participants
09:00–09:30	Opening Ceremony
09:30–10:00	First Plenary Lecture
10:00–10:30	Second Plenary Lecture
10:30–11:30	Group Photo, Poster Exhibition and Coffee Break
11:30–14:00	Parallel Technical Sessions
14:00–14:30	Closing Ceremony and Awards
14:30	End of Conference

Parallel Technical Sessions (11:30–14:00)

Session 1: Materials Science

(Chairperson: Toufik SAHRAOUI, Amphi 3)

Time	Author	Title	Co-Author(s)	Type
11:30–11:40	Kamel DJEBLI	Synthèse par radiolyse gamma de nanocomposites ZnS/Zeolite Y et évaluation de leur activité photocatalytique	Houda TABANI, Nassira KEGHOUCHE	Orale
11:40–11:50	Abdelkader KHAL-FALLAH	Thermodynamic Parameters of GP, η' , and η Phases in Al–Zn–Mg Alloy	Fahd ARBAOUI, Sid Ahmed AMZERT	Orale
11:50–12:00	Rabie AMARI	Photocatalytic Properties of Transition Metal-Doped ZnO Nanopowders	Ammar BOUKHARI, Bahri DEGHFEL, Djamel ALLALI, Elhadj BENRZGUA	Orale
12:00–12:10	Djamel ABDELKEBIR	Effect of Solidification Dynamics on Secondary Dendrite Arm Spacing in Al-Si Alloy and Al-Si/ZrO Composite	Azzeddine Abderrahmane Raho	Orale
12:10–12:20	Abdelhakim DJALAB	Experimental evaluation of the effect of operating parameters on fatigue of materials subjected to mechanical stress	Khatir KHETTAB	Orale
12:20–12:30	Afaf Mokhtari	Phase transformation and kinetics of primary mullite via reaction sintering of algeria kaolin	H. Belhouchet	Orale
12:30–12:40	Kamel DJEBLI	Etude de la composition élémentaire de deux types de marbre prélevés dans la région FIL-FILA en Algérie orientale par la technique k0-NAA	Hamidatou AL-GHEM	Orale
12:40–12:50	Abdelkader KHAL-FALLAH	Kinetics of Phase Transformations in Al–Zn–Mg Alloy Investigated by DSC	Fahd ARBAOUI, Sid Ahmed AMZERT	Orale
13:00–13:10	Yousf BOUREZG Islem	Experimental investigation of nucleation and growth kinetics of lanthanum-based perovskite Material	Sofiane MAKHLOUFI, Foudil SAHNOUNE, Toufik SAHRAOUI, Fateh CHOUIA, Amar DJEMLI	Orale
13:10–13:20	Fateh CHOUIA	Synthesis and microstructural properties of solid-state sintered Kaolin DD3 and Natural phosphate refractories based materials	Yousf BOUREZG, Islem Djallel KHERIFI, Toufik SAHRAOUI	Orale

Time	Author	Title	Co-Author(s)	Type
13:20–13:30	Yousf Islem BOUREZG	Nano-Sized Sodium Zinc Phosphate Glasses Doped with Cobalt Oxide: Structural and Dielectric Properties	Mohamed KHARROUBI, Halima RAMDANI, Foudil SAHNOUNE, Sofiane MAKHLOUFI, Toufik SAHRAOUI, Fateh CHOUIA	Orale
13:30–13:40	Toufik SAHRAOUI	Effects of mechanical activation on the kinetics of mullite synthesis from kaolin-metal ceramic	Fateh CHOUIA, Hocine BELHOUCHE, Yousf Islem BOUREZG	Orale
13:40–13:50	Fateh CHOUIA	Determination of activation energy for anorthite formation in kaolin DD3–natural phosphate mixtures	Yousf Islem BOUREZG, Toufik SAHRAOUI	Orale
13:50–14:00	Aicha Mohadi	DFT Study of Doped Porous Silicon	Riadh Bourzami, Oualid Chinoune	Orale

Session 2: Applied Physics

(Chairperson: Rabeh Belouadeh, Amphi 2)

Time	Author	Title	Co-Author(s)	Type
11:30–11:40	HADJADJI Narimane	A Machine Learning Framework for Enhancing Energy Efficiency in Non-linear Optical Fiber Systems	HADJADJI Narimane, BENGUESMIA Hani	Orale
11:40–11:50	Soumia BENLECHEB	Étude des Propriétés Physiques du ZnSe pour des Applications Optoélectroniques	-	Orale
11:50–12:00	Abderrahmane Tabakh	Coupled Magnetoelectric Behavior in Bilayer Polyurethane–Magnetic Particle /Piezoelectric Ceramic Composites: Experimental Study and Modelling	Abderrahmane Tabakh, Rabah Belouadah	Orale
12:00–12:10	Salheddine RAHMANI BOUZINA	Thermal Performance of Inconel 617 Alloy in the Steam Generator of a High-Temperature Gas-Cooled Reactor for Clean Energy Applications	Salheddine RAHMANI BOUZINA, Djemai MEROUCHE, Yasmina KERBOUA ZIARI	Orale
12:10–12:20	Oussama GHERMOUL	A 3D Analysis of Electric Field and Potential Distributions For A Broken Insulator String Using COMSOL Multiphysics	Oussama GHERMOUL, Hani BENGUESMIA, Badis BAKRI	Orale
12:20–12:30	Slimane ben ali Djihane	Synthesis, Characterization and Physical Insights into Silver Nanoparticles Used in Sensors applications	Slimane ben ali Djihane, Saadi AHLEM SARRA, Atamnia AMIRA, Krid Ferial, Nacef MOUNA	Orale
12:30–12:40	Saadi Ahlem Sarra	Synthesis and Characterization of Magnetic Activated Carbon from Plant Waste for Pollutant Adsorption in Aqueous Media	Saadi Ahlem Sarra, Bousba Salim, Djihane Slimane Ben Ali	Orale
12:40–12:50	Mohamed Laid YAHIAOUI	Brain Tumor Classification from MRI Images Using VGG16 Fine-Tuning	Mohamed Laid YAHIAOUI, kamel DJEBLI	Orale
12:50–13:00	Meryem BRAHIMI	MHD Mixed Convection in a Ventilated Cubic Cavity Filled with a Ternary Hybrid Nanofluid	Meryem BRAHIMI, Razik BENDERRADJI	Orale
13:00–13:10	Mohamed LATRACHE	Numerical Simulation of Piezoelectric Energy Harvesting from Vibrating Structures	Mohamed LATRACHE, Mourad CHALANE	Orale
13:10–13:20	Mourad CHALANE	Heat Transfer in Composite Materials: A Physical and Numerical Approach	Mourad CHALANE, Mohamed LATRACHE, Bachir LABIODH	Orale

Session 3: Condensed Matter Physics

(Chairperson: Messaoud Ciad, S19)

Time	Author	Title	Co-Author(s)	Type
11:30–11:40	Djamel ALLALI	Structural, elastic and thermodynamic characteristics of trigonal-type Zintl phases XZn_2Sb_2 ($X = Ca$ or Sr) under hydrostatic pressure: Prospects for Advanced Materials in High-Pressure and Thermoelectric Devices	Fares ZERARGA, Abdelhak BED-JAOUI, Elhadj BENREZGUA, Missoum RADJAI, Rabie AMARI, Saber SAAD ESSAOUD, Ammar BOUKHARI	Orale
11:40–11:50	Samia Radjel	Structural, Electronic, and Magnetic Properties of Sc_2CrZ ($Z = In, Sn$) Full-Heusler Alloys: A DFT-Based Study	Boucif Benichou, Halima Bouchenafa, Zakia Nabi, Badra Bouabdallah, Azeddine CHERIGUI	Orale
11:50–12:00	Samia Radjel	First-Principles Investigation of Structural, Elastic, Electronic, and Magnetic Characteristics of Rhodium-Based Full-Heusler Alloys Rh_2YSn ($Y = Cu, Co$) toward Spintronic Device Applications	Boucif Benichou, Halima Bouchenafa, Zakia Nabi, Badra Bouabdallah, Azeddine CHERIGUI	Orale
12:00–12:10	Hadjer DILMI	Comparative study of the structural, magnetic and electronic properties of Fe_2SiSe_4	Sabah DILMI	Orale
12:10–12:20	Djalel Mebarki	First-principles calculations of the physical properties of superconducting materials	Salima Saib	Orale

Session 4: Atomic, Molecular and Optical Physics

(Chairperson: Mehamdi abdelkader, S 20)

Time	Author	Title	Co-Author(s)	Type
11:30–11:40	Houda MANSOUR	The Role of Particles and Modified Gravity in the Structure of Charged Compact Stars	-	Orale
11:40–11:50	SEDRATI Fatima Zohra	Optical Characterization of Hydrogenated Silicon ($Si:H$) Using UV-Visible Spectroscopy	DRIAI Liela, SAAD SAOUD Fatma	Orale
11:50–12:00	Meddah Samia	Measurement of atomic L shell Auger yields for elements from 80Hg to 88Ra by photon	Kahoul Abdelhalim, Daoudi Salim	Orale
12:00–12:10	Imane HAMIED	Empirical Determination of the L3 Subshell Jump Ratio (r_{L3}) for Elements with Atomic Numbers 71–77	Abdelhalim KAHOUL, Salim DAOUDI	Orale
12:10–12:20	HADJADJI Nari-mane	A Physics-Based Digital Signal Processing Approach for Nonlinearity Compensation in Optical Fibers	BENGUESMIA Hani	Orale
12:20–12:30	GHEZAL Asma	A New Parameterization of the (n,t) Reaction Cross Section	NEHAOUA Samra, Benaïdja Nouri	Orale

Session 5: Renewable Energy

(Chairperson:Hani Bengessmia , Amphi 1)

Time	Author	Title	Co-Author(s)	Type
11:30–11:40	Nassima BEKHOUCHA	Experimental Validation of Advanced MPPT Algorithms for Photovoltaic Systems Under Variable Conditions	-	Orale
11:40–11:50	Adel DAOUD	Modeling and Analysis of Electrical Performance in CBTS Thin-Film Solar Cells under Doping and Band Gap Modulation	Ali CHEKNANE	Orale
11:50–12:00	Hana MERAH	An Improved Slime Mould Algorithm with Mutated Chaotic Local Search for Optimal Power Flow in Renewable-Integrated Systems	Ikram BOUCETTA	Orale
12:00–12:10	Amar GUICHI	Parameter Estimation of Photovoltaic Models Using an Optimization Algorithm Inspired by Plant Water Uptake and Transport Mechanisms	Ahmed Bendib	Orale
12:10–12:20	BOUZIDI ALI	Modeling and control of a Three-Level Modular Multilevel Converter (MMC)	AKKA ALI	Orale
12:20–12:30	Aboubaker Essaddiq MAZOUZ	MATRIX CONVERTERS FOR NEXT-GENERATION WIND ENERGY SYSTEMS	Said HASSAINE	Orale
12:30–12:40	Nacira Tkouti	MPPT Control of a Stand-Alone Photovoltaic System Using the Grey Wolf Meta-heuristic Optimization Algorithm (GWO)	Raihane Mechgoug	Orale
12:40–12:50	Ikram BOUCETTA	Analysis of FACTS Devices Impact on Power System Stability under Solar Photovoltaic Integration	Hana MERAH	Orale
12:50–13:00	Akka ali	sliding mode control for inverted pendulum	-	Orale
13:00–13:10	OUSSAMA MOUSSA	Improving PV system power using four-leg interleaved boost converter and MPPT based on robust integral linear quadratic control	HELLALI LAL-LOUANI, AKKA ALI	Orale
13:10–13:20	OUSSAMA MOUSSA	Design and PIL implementation of a new robust backstepping based low-complexity voltage-oriented control method for four-leg rectifiers	HELLALI LAL-LOUANI, AKKA ALI	Orale