



MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH  
 HIGHER SCHOOL OF TEACHERS IN BOUSAADA  
 DEPARTMENT OF SCIENCE PHYSICS IN COOPERATION  
 WITH  
 THE LABORATORY OF MATHEMATICS AND APPLIED PHYSICS.



## الملتقى الوطني الأول للفيزياء وتطبيقاتها

### THE 1<sup>st</sup> NATIONAL CONFERENCE ON PHYSICS AND ITS APPLICATIONS

NCPA 23  
 BOUSAADA  
 ON  
 07 December 2023

Honorary President of the Conference

Pr. OUALI DERRA  
 General Chair  
 Dr. AKKA ALI



## Conference Presentation

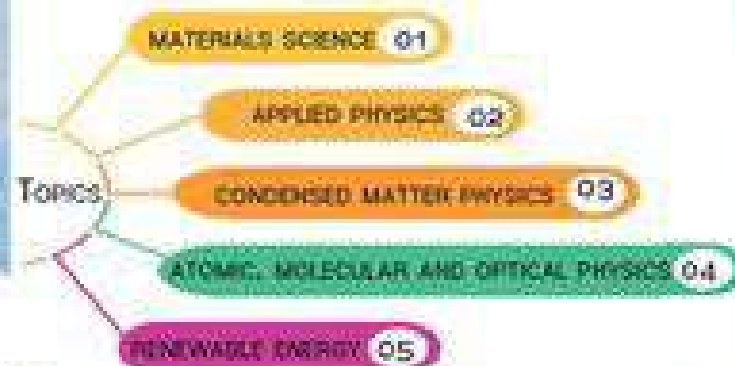
NCPA 23

IS THE FIRST EDITION OF THE NATIONAL  
**CONFERENCE ON PHYSICS AND ITS APPLICATIONS. THE MAIN  
 OBJECTIVE OF THE CONFERENCE IS TO BRING TOGETHER  
 ACADEMIC RESEARCHERS AND SCIENTISTS ON DIFFERENT  
 TOPICS TO DISCUSS AND EXCHANGE KNOWLEDGE AND  
 TECHNOLOGICAL INNOVATIONS IN SEVERAL FIELDS AROUND  
 Physics and its Application.**



## Conference topics

THE CONFERENCE WILL BE FOCUSED ON SEVERAL FIELDS  
 OF APPLICATIONS, THE MAIN TOPICS INTEREST CONFERENCE ARE



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## Guest Speakers



Pr. CHOUDEUR Aissa  
University of M'sila



Monitoring, Fault Detection and Diagnosis  
of Grid Connected PV Systems



M. MEFEDJEKH Aissa  
Sous-directeur de la programmation  
de la recherche et de la prospective  
أهمية تنفيذ مشاريع البحث في الأداء التكويني



**SUBMISSION OF ABSTRACTS: SEPTEMBER 28, 2023**

**ABSTRACT SUBMISSION DEADLINE: NOVEMBER 10, 2023**

**NOTIFICATION OF ACCEPTANCE: STARTING FROM NOVEMBER 15, 2023**

## CONTACT INFO



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## SUBMISSION

YOU ARE WELCOME TO SUBMIT YOUR  
UNPUBLISHED ABSTRACTS TO OUR CONFERENCE  
NCPA23 THROUGH E-MAIL:

[ncpa.ensb@ens-bousaada.dz](mailto:ncpa.ensb@ens-bousaada.dz)

THE ADOPTED TEMPLATE SHOULD BE UPLOADED VIA  
THE CONFERENCE WEB SITE.



REGISTRATION FEE

THE PARTICIPATION IN THE NCPA 23 IS FREE CHARGE

08:00 -- 08:30		Registration				
08:30 -- 09:00		Opening session				
	Name & First name	University		Theme		
09:00 -- 09:30	Prof. Abdelhafid MAHROUG	University of M'sila		Copper oxide/zinc oxide nanocomposites thin films: elaboration and their photodegradation properties		
09:30 -- 10:00	Prof. Razika IHDDADENE	University of M'sila		Etude de performance des centrales PV en Algerie		
10:00 -- 11:00	Poster session & coffee break					
Oral session						
	Room =	Amphi 1	Salle 20	Amphi 3	Salle 19	Amphi 2
Times		Topic 1: Materials science.	Topic 2: Applied physics.	Topic 3: Condensed matter physics.	Topic 4: Atomic, molecular and optical physics.	Topic 5: Renewable energy
11:10 -- 11:00	Participant	MAJDA KHALDI	Rebiha Marki	Kheireddine Zoubir MAHDJOUB	Redouane MILOUA	SAOUDI Mohammed
	Title	Study of Crystallization Kinetics Behavior, and Thermodynamics Properties of Zinc Phosphate Glass	Modelling of Carbon Nanotube Field Effect Transistors (CNTFETs)	A new semiconducting half-Heusler compounds CdScZ (Z = As, Sb) with half-metallicity behavior	A new fitting-based method to extract the optical constants and thickness of transparent thin films	A Deadbeat Current Controller for Single Phase PV Grid Connected Inverters
	University	University of Djelfa	University of Souk Ahras	University of Sidi-Bel-Abbes	University of Tiaret	University of Msila
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE
11:20 -- 11:10	Participant	BOUIDER BADIAA	Abdelkader MOHAMMEDI	Rabah MOUSSA	Khaididja KAHOUL	MOUSSA Oussama
	Title	Metal organic frameworks / graphene oxide composites (MOF/GO) for enhanced photocatalytic activity of methylene blue degradation under solar light	Effect of doping In doped Cu2O on the optical properties prepared by spray pyrolysis method for photocatalytic applications	Structural, electronic and optical properties investigations of the cubic Ga1-xAlxAs1-yPy quaternary alloy; from ab-initio method	A comparative study on synthesized and commercial tio2 photocatalysts for organic dye removal	Uncertainty-Induced Robust Nonlinear Control of a Three-Phase Shunt Active Power Filter
	University	University of Bejaia	ENS Bousaada	Ziane Achour University of Djelfa	University of Skikda	University of ghardaia
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE
11:30 -- 11:20	Participant	Yousf Islem BOUREZG	Riadh MOKHTARI	Missoum RADJAI	Hanane CHENAGUE	OUAGUENI Fayssal
	Title	XAFS and XRD studies of the structural properties in sodium-zinc-phosphate glass doped with copper oxide	Design of Magneto Photonic Crystal Microcavity	Contribution to the study of certain physical properties of fluoro perovskite compounds	Structural and optical properties of undoped and Al doped zno thin films deposited by spray pyrolysis technique.	Modeling and Control of the Nonlinear Tubular Solid-Oxide Fuel Cell System Based on TS Fuzzy Theory and Predictive Control
	University	University of Djelfa	ENS Bousaada	University of Medea	University of Msila	University of Msila
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE
11:40 -- 11:30	Participant	IBTISSA SEBAI	Fatima MERDJ	Hatem ALLAF	Abderrahmane BENHADJIRA	BOUREGUIG Kada
	Title	Enhancing the photoactivity of NiO toward hydrogen photoproduction using alumina as support	Analysis and Control of the Magneto-Hydrodynamic Pump	Physical properties of Be-Based fluoroperovskite compounds XBeF3 (X = K, Rb): a first-principles study	Gamma radiation shielding study of rare earth-doped fluorophosphates glasses	Optimal Nonlinear Control of DFIG Wind Turbine System Based Artificial Bee Colony Algorithm
	University	Higher Normal School of Bousaada, M'SILA	Université Batna 2	University of Medea	University of Ouargla	University of Msila
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE
11:50 -- 11:40	Participant	SMAIL TERCHI	Ahmed Yassine BOUKOUNACHA	Ibrahim AMERI	Asma BENAIDJA	BAKRI Badis
	Title	Valorisation d'un déchet agricole (noyaux d'olive) d'une zone de M'Sila dans le domaine traitement des eaux pollués par le Crystal Violet	The Influence of the Presence of Nanoparticles on the Heat Transfer Properties and Dielectric Strength of Transformer Oils	Ab-initio study of magnetic properties of the orthorhombic perovskite	Ionising radiation and its applications in medicine	Use of the Artificial Neural Network and Meteorological Data for Predicting: Case Study Ain El-Mel, Algeria
	University	University of M'SILA	University of Laghouat	University of Sidi-Bel-Abbes	University of Jijel	University of Msila
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE

12:00 -- 11:50	Participant	SOUMAYA MESSAOUD	Chams Edoha Labidi	Sarah CHABA MOUNA	Fatima Zohra BELOUNIS	GHERMOUL Oussama
	Title	Impact of carbonization temperature on the capacity for adsorption of activated carbon made from palm leaves by H <sub>3</sub> PO <sub>4</sub> activation	Experimental and theoretical study of bioceramic	Structural, elastic, and electronic properties of LiPbBr <sub>3</sub> under pressure	Monte Carlo simulation using PENELOPE for intracavitary brachytherapy	Response surface methodology and Artificial neural network comparison in making a prediction model for the flashover voltage of the 1512L insulator
	University	University of Biskra	university of biskra	University of Medea	University of Constantine1	University of Msila
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE
12:10 -- 12:00	Participant	SELMANE HADJAB	Mahdia Yousfi	Asmaa KERMEZLI	Tarek KHATIR	BENGUSMIA Hani
	Title	Synthesized of ZnO NPs by simple Co-precipitation method	Effect of rheological model of viscosity on stress tensor in blood flow in aorta with aneurysm	Theoretical study of structural, and elastic properties of cubic perovskite compound	Distortion effect in (e,2e) processes for tomic and molecular targets	Realization of a Solar Irradiation Measurement Device based on a Reference Cell and an Arduino Uno
	University	Université de Jijel	University of Skikda	University of Medea	CRNA Alger	University of Msila
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE
12:20 -- 12:10	Participant	SAMIR HAMRIT	Sabah KABACHE	Hamza REKAB DJABRI	Liyes AGUEDAL	AKKA Ali
	Title	Nanostructured Transparent Conductive Oxide Al doped ZnO thin films onto glass substrates deposited by RF- magnetron sputtering from supercritical solvothermal nanopowder target.	Optimizing pemfc hydrogen and oxygen gas flow control: a Improved study of a conventional control based on load Demand	Computational study of structural and electronic properties of Scandium-Arsenic for applications in optoelectronics	Control of flow around a cylinder through radial sinusoidal deformation	Fuzzy Logic based Control Strategies for Proton Exchange Membrane Fuel Cell System
	University	University of M'sila	University of Boumerdès	University of Bouira	University of Constantine1	ENS Bousaada
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE
12:30 -- 12:20	Participant	ABDELMADJID SI SALEM	Mohamed BEHLOUL	Yousf Islem BOUREZG	Besma BELAIFA	HELLALI Lallouani
	Title	Physical and chemical characterization of a novel eco-friendly plaster/cork material designed for building insulation applications	Pyroelectric P (VDF-TrFE) energy harvesting: effect of heat insulation in the tension and current response.	Physical properties of ternary halide perovskite AgXBr <sub>3</sub> (X= Ca, Sr): Ab initio study	Etude du soliton acoustique poussiéreux dans un plasma polarisé en présence des ions piégés	Detection Fault of Induction Motor Drive Supplied By PMW Voltage Source Inverter
	University	University of Tizi Ouzou	ENS Kouba	Ziane Achour University of Djelfa	ens-Kouba	University of Msila
	Session Chairs	Dr. SAHRAOUI Toufik	Prof. Abdelhafid MAHROUG	Dr. SAID messaoud	Dr. KHALFALLAH Abdelkader	Prof. Razika IHDDADENE
12:40 -- 12:30	Participant	SAHRAOUI TOUFIK	Mohamed BEHLOUL			
	Title	Synthesis and properties of porous SiC ceramics produced from kaolin-Al-Carbon mixture powders	Pyroelectric P (VDF-TrFE) energy harvesting: effect of heat insulation in the tension and current response.			
	University	Higher Normal School of Bousaada, M'SILA	ENS Kouba			
	Session Chairs	Dr. FATEH CHOUIA	Prof. Abdelhafid MAHROUG			
12:40 -- 13:00	Choosing the best Poster					
13:00 -- 13:10	Distribution certificate and closure NCPA 2024					