

## Scientific Program ACNDT2016 / IC-WNDT-MI'16

Friday, November 25, 2016	
15h00-19h30	Reception and Registration at Hotel EDEN PALACE Aïn-Turck Oran
20h00	Dinner
Saturday, November 26, 2016	
08h00	Departure to Centre de Recherche en Anthropologie Sociale et Culturelle (C.R.A.S.C) El-M Naouer - Technopôle de l'USTO, Bir El Djir, Oran
09h00-9h30	<b>Opening Ceremony</b> <b>Centre de Recherche en Anthropologie Sociale et Culturelle (CRASC)</b>
<u>09h30-11h45: 03 Plenary Sessions (Presidents: M. Zergoug, A. Badidi bouda, M. Farley)</u>	
9h30-10h10	<b>Plenary Conference I</b> “Positrons as Non Destructive Characterization tool” <b>Pr. AOURAG Hafid</b>
10h10-10h50	<b>Plenary Conference II</b> “The importance of NDT and NDT Research” <b>Dr. Mike Farley (ICNDT PGP Chairman)</b>
10h50-11h10	<b>Coffee break</b>
11h10-11h45	<b>Plenary Conference III</b> “Enjeux de l'accréditation 17020,17024,17025 dans le CND” <b>Mr. Boudissa</b>
11h45-13h00	Departure to Hotel EDEN PALACE
13h00-14h00	<b>Lunch Break</b>
14h00-16h00	<b>Oral Session I</b> Room: 1 (ACNDT2016) Room: 2 (IC-WNDT-MI'16)
16h00-16h30	<b>Coffee break</b> <b>Poster Session I/A</b>
16h30-18h30	<b>Oral Session II</b> Room: 1 (ACNDT2016) Room: 2 (IC-WNDT-MI'16)
18h30-19h00	<b>Poster Session I/B</b>
20h00	Dinner
Sunday, November 27, 2016	
<u>08h30-10h10: 02 Plenary Sessions (Presidents: M. Farley, T. Boutekjirt)</u>	
8h30-9h 30	<b>Plenary Conference I</b> “Acoustic in NDT field” <b>Pr OSMANI</b> Universite de Valencienne
9h30-10h10	<b>Plenary Conference II</b> “Certification of NDT and CM Personnel” <b>Dr. Mike Farley</b>
10h10-10h40	<b>Coffee break</b> <b>Poster session II</b>
<u>10h45-12h50: 01 Plenary Sessions (Presidents: F. Herelli, M. Zergoug)</u>	
10h45-12h50	<b>Panel discussion on Qualification of NDT Personnel'</b> Dr. Mike Farley (ICNDT PGP Chairman) Dr. Harold Jansen (AFNDT & SAIW)

	Farid Herelli (AFNDT) Cooperation IAEA- AFNDT
13h00-14h00	<b>Lunch Break</b>
14h00-16h00	<b>Oral session III</b> Room: 1 (ACNDT2016) Room: 2 (IC-WNDT-MI'16)
16h00-16h30	<b>Coffee break</b>
	<b>Poster session III/A</b>
16h30-18h30	<b>Oral session IV</b> Room:1 (ACNDT2016) Room: 2 (IC-WNDT-MI'16)
18h30-19h00	<b>Poster session III/B</b>
20h00	<b>Dinner</b>

## Monday, November 28, 2016

08h30-10h10: 02 Plenary Sessions (Presidents: S. Lebaili, Y. Benkheda)

08h30-09h30	<b>Plenary Conference I</b> “Diamond Tool Wear in Diamond Turning of Rapidly Solidified Optical Aluminium” <b>Pr. Khaled Abou-El-Hossein</b>	8 <sup>h</sup> 45-12 <sup>h</sup> 30 <b>Meeting of the ICNDT Policy and General Purposes Committee ( Room: 2)</b>
09h30-10h10	<b>Plenary Conference II</b> “On the JMAK kinetics of phase transformations in metals” <b>Pr. M. BOUABELLAH</b>	
10h10-10h40	<b>Coffee break</b>	
	<b>Poster session IV</b>	
10h45-12h30	<b>Oral session V</b> Room: 1 (IC-WNDT-MI'16)	
12h30-13h00	<b>Closing Ceremony</b>	

## Oral Sessions

November 26, 2016

### Oral Session I

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#### Room 1 (ACNDT2016): Ultrasonic NDT Methods (Presidents: R. Draï, M. Osmani)

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14h00-16h00

	Weld Defects Recognition and Classification using Ultrasonic Signals <b>Naima MEZHOUD</b> , Fairouez BETTAYEB, Yacine AMARA, Abdennour LABED
	Measurement of thickness of thin metal sheets by the A0 Lamb mode at low products frequency thickness <b>S. Sait</b> , F. Boubenider
	The technique enabling measurement of the dispersion influence of the phase velocity of Lamb wave signals propagating in the higher dispersion zone L. Draudvilienė, <b>H. Ait Aider</b>
	Non-destructive testing of concrete cover using spectral analysis of ultrasonic surface waves <b>Morad GRIMES</b> , Zoubir Mehdi SBARTAÏ, Nabil YACEF
	The defaults geometry influences on the propagation of the guided waves Numerical study with finite elements method Nadia HARHAD, <b>Soumia CHAIEB EDRAA</b>
	Increased your Asset integrity using the latest UT, non-intrusive corrosion monitoring Technologies <b>Thaer Alkhouri</b>
	Ultrasonic TOFD Technique for Cracks Sizing and Locating Based on PSO <b>Yacef Nabil</b> , Boudjen Toufik, Grimes Morad
	THEORETICAL AND NUMERICAL STUDY OF THE REFLECTION OF AN ULTRASONIC PULSE RADIATED BY A LINEAR PHASED ARRAY TRANSDUCER AT A FLUID-FLUID INTERFACE <b>A. Oudina</b> , H. Djelouah
	Ultrasonic attenuation in trabecular bone: Theoretical approach and experimental measurement <b>Bennamane Abderrazek</b> , Boutkadjirt Tarek

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#### Room 2 (IC-WNDT-MI'16): Theme 1 Welding, welding metallurgy, simulation of process, residual stresses in welding, electric Arc, plasma...etc. (Presidents: R. Badji, S. Frappart)

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14h00-16h00

	Evaluation of the Corrosion Behaviour of Friction Stir Welded High Yield Strength Steels by Scanning Electrochemical Microscopy <b>Simon FRAPPART</b> , Loïc Grégoire, Philippe Missoffe
	Experimental study of metal transfer of CMT welding <b>Bachir MEZRAG</b> , Ismail BOURI, Frédéric DESCHAUX BEAUME, Mustapha BENACHOUR
	Joining of polymer-metal lightweight structures using self-piercing riveting technique: context of study, numerical approach and preliminary results <b>Elias AMRO</b> , Afia KOUADRI-HENNI, Vigen ARAKELIAN
	Effect of resistance spot welding parameters on mechanical behavior of thin sheet <b>BENACHOUR Mustapha</b> , LARBI CHERIF Mohamed
	Numerical modelling of hybrid laser friction stir welding of aluminum alloy <b>Oussama Mimouni</b> , Mohamed Hadji, Nabil Chekroun, Riad Badji, Afia Kouadri-David, M'hamed djelloul abbou
	A comparative study between pulsed and unpulsed Ti-6Al-4V alloy TIG welds <b>B. Mehdi</b> , R. Badji, L. Rabahi, N. Kherrouba, V. Ji, B. Alili, D. Bradai, F.D. Beaume
	SEM/ DRX / EBSD characterization of electric submerged arc welded of an industrial low carbon steel Semcheddine DERFOUF <b>Amria BOURAS</b> , Nourdine BELGHAR

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16h00-16h30

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Coffee break

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## Oral Session II

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### Room 1 (ACNDT2016): NDT for Material Characterisation (Presidents: K. Cain, M. H. Alaalam)

16h30-18h30

Thermography for Face Recognition Application <b>Z. Mentouri</b> , M. Zergoug, S. Ziani, H. Bourouba, A. Moussaoui
The finite element method and the Infrared Thermography principle applied to the control of homogeneity between a weld and the structure to weld <b>Sougrati Belattar</b>
Acoustic Emission Monitoring of high risk installation in industrial environment <b>Hamid HAFID</b> , Alain PROUST, Richard DUNOYER, Omar AL HAJ
The Effect of Laser Treatment on the Erosion Resistance of a CU copper -NI Austempered Ductile Iron <b>Mohamed H. Alaalam</b> , Abdussalam M. Drah
Crystallization kinetics phenomena assessment in a glass-ceramic material, by non-destructive spectroscopic methods <b>D. Moudir</b> , N.Kamel, A . Benmounah, A.Djeridi, A.Sari, Y. Mouheb, S.Kamariz, F.Aouchiche
Study of the effect of $\gamma$ -ray irradiation on the optical properties of polyethylene terephthalate polymer <b>K. Chikaoui</b> , M. Djebara, R. Yefsah, M, Siad, M. Abdesselam
Magneto-electrique and magnetic studies of the Sr-doped Samarium manganite synthesized by citrate gel method <b>E. Lakhal</b> , A. Amira, R.Chihoub, S. P. Altintas, A. Varilci, C. Terzioglu

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### Room 2 (IC-WNDT-MI'16): Theme 2 Metallic materials Elaboration, forming, phase transformations, simulation, mechanical behavior (Presidents: Y. Benkeedda, K. Abou-El-Hossein)

16h30-18h30

Effect of cold rolling on texture evolution during primary recrystallization of an IF steel <b>M. Ramoul</b> , A. Ayad, N. Rouag
Experimental study of shot peening effect on the surface of austenitic stainless steels: roughness, residual stresses and work hardening <b>Mohamed Chaib</b> , Mohamed Belhamiani, Abdelkader Megueni, Abdelkader Ziadi, F. Javier Belzunce
Influence of sintering temperature on the densification of copper matrix composite reinforced with CoAl particle developed by SHS <b>K. KHELOUI</b> , S. AZEM, M. NECHICHE
First principles study of the new half-metallic ferromagnetic full-Heusler alloys $\text{Co}_2\text{CrSi}_{1-x}\text{Ge}_x$ : An ab-initio study <b>I. Asfour</b> , D. Rached
Numerical analysis of Hydrogen embrittlement of CrMo and CrMoV steels using Monte Carlo method <b>Soumia Ourrad</b> , Youcef Houmadi, Abdelkader Ziadi, F. Javier Belzunce

November 27, 2016

Oral Session III

Room 1 (ACNDT2016): Electromagnetic NDT Methods (Presidents: H. Jansen, A. Benson)

14h00-16h00	Non intrusive stochastic finite elements method applied for non destructive NDT problems <b>Azouaou Berkache</b> , Zehor Oudni, Hassane Mohellebi, Taib Brahimi Abdelhalim
	Fast Finite Element Computation for 3D Eddy Current Testing Problems with T- $\Omega$ Formulation <b>M. Hamel</b> , H. Mohellebi, F. Hocini
	3D Phase Measurement : get your accurate 3 dimensional surface scans and measurement while simplifying your inspection process <b>Hafees Faisada</b>
	Harmonized system for the training, qualification and certification of personnel, implemented within the French Confederation for NDT (COFREND) <b>André CHARBONNIER</b>
	Stress and temperature effects study on anhysteretic curves behavior of magnetostrictive materials <b>TAMAZIRT Souad</b> , MOHELLEBI Hassane
	Reconstitution of complex defects with the method of neural network: Application for the nondestructive evaluation <b>A. Harouz</b> , H. Mohellebi, M. Hamel
	DO PERMANENT MAGNETS WORK? <b>Keith Cain</b> , Marius Purcell
	Study of the Effect of the Geometry Shape of defect on the Reliability of NDT Device <b>Z. Oudni</b> , H. Mohellebi

Room 2 (IC-WNDT-MI'16): Theme 3 Composite and ceramic materials (Presidents: M. Azzaz, M. Bouabdelah )

14h00-16h00	Study of the repair of the pipes damaged by patch in composites <b>AZZOZ Achewek</b>
	Reliability-simulation of composite tubular structure by finite elements method-Mechanical loading <b>A. Maizia</b> , A. Hocine, A. Ghouaoula, D. Chapelle, H. Dehmous
	Structural and electrical Properties of the ceramic manganite $Pr_{0.6}Sr_{0.4}Mn_{1-x}Cu_xO_3$ <b>R.Chihoub</b> , A. Amira, E. Lekhal, A. Varilci, S.P. Altintas, C. Terzioglu
	Elaboration and Characterization of PbS nanorods trapped in Y zeolite <b>H. Tebani</b> , N. Keghouche
	Comparison of IR Spectra of Five Porcelain Compositions Prepared Using Algerian Raw Materials <b>S. Kitouni</b> , A. Harabi
	Contribution à l'étude du comportement du composite verre/polypropylène par la technique de nano-indentation instrumentée <b>A. Mokhtari</b> , N. Tala Ighil, A. Brick Chaouche, K. Bettahar
	A new and economic approach to synthesize and fabricate anorthite based ceramics using kaolin and CaCO <sub>3</sub> <b>S. Zaïou</b> , I. Serradj, A. Harabi
	The effect of Sintering condition on the microstructure and Electrical Conductivity of Apatite-type La <sub>9.33</sub> (SiO <sub>4</sub> ) <sub>6</sub> O <sub>2</sub> ceramic <b>A. Saoudel</b> , N. Azzouz, S. Boulfrad and J. T. Sirr Irvine

16h00-16h30 Coffee break

## Oral Session IV

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**Room 1 (ACNDT2016): New NDT Tools(Presidents: K. Cain, A. Benammar)**


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**16h30-18h30**

Computed radiography : Application and benefits for profile inspection <b>Haitham Ibrahim</b>
Investigating applicability of discontinuous Galerkin methods towards structural health monitoring in transportation <b>Salah-Eddine HEBAZ, Farouk BENMEDDOUR, Emmanuel MOULIN, Jamal ASSAAD</b>
A comparison of tow powerful optimization method, genetic algorithm and practical swarm optimization for the design of waveguide filters <b>I. Bouchachi, I. Messaoudene, M. Boudjerda, A. Reddafi, K. Ferroudji, M.L. Riabi</b>
Multistep Relaxations in a Spin-Crossover Lattice with Defect: a Spatiotemporal Study of the Domain Propagation <b>Rachid Traiche, Hassane Oubouchou, Jorge Linares, Mourad Zergoug and Kamel Boukheddaden</b>
Temperature Effects on Thin film Based SPR-Sensor <b>S. Benaziez, Z. Dibi, N. Benaziez, B. Abdelhadi</b>
Radiographic Weld Images Denoising Using Wavelet-Based Technique <b>Fatma Zohra BOUDANI, Nafaa NACEREDDINE</b>
Testing the setting and hardening of concrete using the prism technique <b>F. Kemihaa, A. Bouhadjerab, M. Grimes, T. Benkedidah</b>
Monitoring of cracking in reinforced concrete beam by using Digital Image Correlation (DIC) and Acoustic Emission (AE) <b>A. BELBACHIR, S.Y. ALAM, M. MATALLAH, A. LOUKILI</b>

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**Room 2 (IC-WNDT-MI'16): Theme 4Corrosion and materials protection, pitting corrosion, stress corrosion, coating, thin films, ...etc. (Presidents: T. Chouchane, H. Meradi)**


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**16h30-18h30**

Improvement in Nano-hardness and Corrosion Resistance of XC48 samples by plasma immersion ion implantation <b>M. M. ALIM, N. SAOULA, R. TADJINE, F. HADJ-LARBI, A. KEFFOUS and M. KECHOUANE</b>
SURFACE CONDITIONS EFFECT ON THE CORROSION BEHAVIOUR OF STEEL REBAR IN SIMULATED CONCRETE PORE SOLUTION <b>Somia BELKHIR, Hakim BENSABRA, Noureddine AZZOZ, Agnieszka FRANCZAK, Omar ABOUBI, Jean Paul Chopart</b>
DURABILITY OF CONCRETE UNDER THE INFLUENCE OF SULPHATES ATTACK IN THE REGION OF OUARGLA – ALGERIA <b>Mohammed-Amin BOUMEHRAZ, MELLAS Mekki</b>
The inhibition effect of Gum Arabic (GA) On the corrosion of carbon steel in H <sub>2</sub> SO <sub>4</sub> medium <b>Hicham TAOUI, Ahmed LOUAFI, Hamza Bentrah, Abdelouahad Chala</b>
NUCLEATION AND FORMATION OF OXIDE FILM UNDER A MAGNETIC FIELD <b>M. Amirat, A. Beloufa and A. Dekkiche</b>
Structural, Morphological and Optical Properties of Zn(1-x)Cd <sub>x</sub> O thin films by spray pyrolysis method <b>A. SERRAR, K. BOUZID, A. ABDELHAK, A. ROUSTILA</b>
Identification of Fe-Al intermetallic phases in aluminide coatings on mild steel <b>Sabrina Mendil, Kamel Taïbi, Said Azem</b>
Effect of some experimental conditions on the electroplated Mn-Bi film composition <b>S. Boudinar, N. Benbrahim, B. Benfedda, A. Kadri, E. Chainet</b>

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November 28, 2016  
**Oral Session V**

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**Room 1 (IC-WNDT-MI'16): Theme 4Corrosion and materials protection, pitting corrosion, stress corrosion, coating, thin films, ...etc. (Presidents: T. Chouchene, A. Haddad, H. Meradi)**

10h45-12h30	A comparative study of potentiostatic and pulsed Electrodeposition of ZnS nanostructures <b>K.GHEZALI</b> , L.MENTAR, B. BOUDINE, A.AZIZI
	Evolution of texture and residual stresses with the thickness for AlN films deposited by dcMS on Si (100) <b>B. Riahi</b> , A. Ayad, J. Camus, M.A. Djouadi, N. Rouag
	The influence of annealing temperature and mercury doping (Hg) on nanostructures thin films of TiO <sub>2</sub> obtained by sol-gel method <b>F. Abbas</b> , R. Bensaha
	Influence of oxygen fraction on the deposition of Al <sub>2</sub> O <sub>3</sub> thin film onto the steel by magnetron sputtering <b>A. Hammouche</b> , N. Saoula, N. Madaoui, L. Zougar, D. Dergham, L. Bait
	Copper Oxide Thin Films Deposited by Radiofrequency Magnetron Sputtering: Photovoltaic Applications <b>R. Tadjine</b> , A. Haouimi, M.M. Alim, M. Kechouane
	Elaboration et caractérisation morphologique et mécanique des couches minces deZrN déposées par ablation laser <b>I. GHEMRAS</b> , S. ABDELLI-MESSACI, M. IZERROUKEN, K.YAHIAOUI, S.LADJOUZI, M.BOUAKIL
	Properties of thin films Cr-N, Cr-Mo-N, Ti-Al and Ti-Al-N, prepared by PVD <b>H. Berkane</b> , L. Chekour, Y. Benlatreche, I. Rahil
	First principle investigation of structural, electronic and optical properties of Er-doped (ZB) ZnO using modified Becke-Johnson exchange potential <b>E. A. Alkahtani</b> , A. E. Merad, M. R. Boufatah, A. Benosman

