



NİŞANTAŞI
ÜNİVERSİTESİ

University of Djelfa 17000 DZ Algeria
URL: <http://www.univ-djelfa.dz/icgtit/>

Program



The 1st International Conference on Gas Turbines and Industrial Turbomachinery - [ICGT&IT 2022](#) -
Djelfa on 19-20 November 2022, Algeria

19/ 11 / 2022	
8 h – 9 h 00	Registration
9 h 00 – 09 h 45	Opening Ceremony (Faculty conference room) Prof El Hadj AILAM, Dr AMROU HOUCEME EDDINE, Dr Aissa MFEDJEKH
09 h 45 – 10 h 30	Plenary Session 1 Decarbonizing the Energy Sector through Hydrogen Fueled Gas Turbines Professor Kamal Mohammedi MESO/URMPE, M Bougara University, Boumerdès, Algeria Chairs : Prof Kamal GUESMI and Dr Mohamed Mustapha BENAMARA
10 h 30 – 10 h 45	Plenary Session 2 Presentation of IEEE Algeria Section Professor Abdellah Kouzou University of Djelfa, Algeria Chairs : Prof Soumia KOUADRI MOUSTEFAI and Prof Moukhtar FODILI
10 h 45 – 11 h 00	Coffee break
11 h 00 – 11 h 35	Plenary Session 3 in Visio-conference Exploration of signal models for the diagnosis of rotating machines : Old and new Professor Jerome Antoni Laboratory of Vibration and Acoustics, Campus LyonTech la Doua – INSA Lyon, France Chairs : Prof Kamal Mohammedi and Pr Hachi Brahim El Khalil



Gas Turbine



سوناتراك





NİŞANTAŞI
ÜNİVERSİTESİ

University of Djelfa 17000 DZ Algeria
URL: <http://www.univ-djelfa.dz/icgtit/>

Program



The 1st International Conference on Gas Turbines and Industrial Turbomachinery - [ICGT&IT 2022](#) -
Djelfa on 19-20 November 2022, Algeria

19 / 11 / 2022 : Oral Sessions



	Session 1	Session 2	Session 3 in Visio
Chairs	Pr Kouzou A. and Dr Cherroun L.	Pr Guesmi K. and Dr Bradai R.	Pr Mohammedi K. and Dr Iratni A.
11h40 - 11h55	ID.27 Sidali Aissat, Ahmed Hafaifa, Abdelhamid Iratni, Obaid S. Alshammari, Ilhami Colak, Decoupled-states multi-model fuzzy identification of Compressor using their operating data	ID.28 Choayb Djeddi, Nadji Hadroug, Larbi Brahimi, Nadji Hadroug, Belgacem Said Khaldi, Performance analysis of a gas turbine protection system using Petri nets based fault tree analysis	ID.12 Sofiane Ouali, Effect of adding hydrogen to methane-air flames, application to gas turbines
11h55 - 12h10	ID.18 Djamel Halimi, Ahmed Hafaifa, Optimisation des interventions de maintenance préventive d'un TOP DRIVE à partir des objectifs multifactoriels basés sur une modélisation de l'évolution des modes de défaillance par des réseaux Bayesiens	ID. 1 Mustapha Adda, Nadji Hadroug, Naima Sofi and Ahmed Hafaifa, Gas turbine performance monitoring based on reliability and availability analysis	ID.20 Omar Allag, Abdellah Kouzou, Meriem Allag, Hoo - MVT-PI state feedback controller to the Open-End-Winding Three-Phase Induction Motor under field oriented control
12h10 - 12h25	ID.10 Yasser Chiker, Rachid Tiberkak, Mourad Bachene, Madjid Ezzraimi, Mouloud Guemana, Mohamed Essedik Lazar, Static analysis of layer-wise nanocomposite plates reinforced with single walled carbon nanotube (SWCNT)	ID.19 Hakim Bagua, Kouider Laroussi, Ahmed Hafaifa, Mathematical modeling of an industrial gas turbine and it's optimal control system design	ID.26 Mohamed Bachiri, Telha Mostefa, Unsteady Velocity Distribution of the Air flow along an Inclined Solar Panel for Different Directions



Gas Turbine



سوناتراك



سونلغاز





NİŞANTAŞI
ÜNİVERSİTESİ

University of Djelfa 17000 DZ Algeria
URL: <http://www.univ-djelfa.dz/icgtit/>

Program



The 1st International Conference on Gas Turbines and Industrial Turbomachinery - [ICGT&IT 2022](#) -
Djelfa on 19-20 November 2022, Algeria

19 / 11 / 2022 : Poster Sessions



	Session 1	Session 2	Session 3 in Visio
Chairs	Pr Tlemçani A. and Dr Hanini N.	Dr Kazrane C. and Dr Halimi D.	Dr Chiba Y. and Dr Lasbat Y.
12h25-13h00	ID.42 Sidali Aissat, Ahmed Hafaifa, Houssem Jerbi, Obaid S. Alshammari, İlhami Colak, Gas turbine monitoring using an expert system with real-time fault detection approach	ID.37 Larbi Brahimi, Mourad Bachene, Mouloud Guemana, Ahmed Hafaifa, Exploitation of reliability and availability model of a complex industrial system using modern methods	ID.15 Hanane Chaourar, Abdelhamid Iratni, Kouider Laroussi, Diagnostics of faults in wind turbines using the extended Kalman filter
	ID.9 Naas Cherrak, Ahmed Zohair Djeddi, Mohamed Elbar, Ahmed Hafaifa, Johnson's SU Distributions for fitting gas turbine reliability data	ID.14 Benrabebeh Djaidir, Abdelkader Ruibah, Ahmed Hafaifa, A Data-Driven Approach for Condition Monitoring with Signal Processing in Rotating Machinery	ID.44 Larbaoui R., Boualem K., Benali Kouchih F., Fellahi M., Safa A., Azzi A., The influence of obstacle installed in jet exit on film cooling performance and aerothermal structure
	ID.29 Telha Mostefa, Naas Toufik Tayeb, Bachiri Mohamed, hadroug Nadji, Mahammedi Abdelkader, Numerical study of domestic wind turbine	ID.32 Mohamed Ben Rahmoune, Abdelhamid Iratni, Ameur Miloud Kaddouri, Ahmed Hafaifa, Gas turbine reliability estimation using analytic approach	/
	ID.3 Nadji Hadroug, Abdelhamid Iratni, Ahmed Hafaifa, Mourad Bachene, Salam Abudura, Vibration diagnosis and monitoring system of GE MS5002 Gas turbine	ID.11 Yasser Chiker, Rachid Tiberkak, Mourad Bachene, Madjid Ezzraimi, Mouloud Guemana, Mohamed Essedik Lazar, Bending analysis of laminated nanocomposite plates reinforced with functionally graded single-walled carbon nanotube (SWCNT)	ID.38 Khaled Sahounoune, Abderrahmane Benbrik, Computational fluid dynamics based erosion prediction model in a hydraulic turbine
13h00 – 13h45	Lunch		





NİŞANTAŞI
ÜNİVERSİTESİ

University of Djelfa 17000 DZ Algeria
URL: <http://www.univ-djelfa.dz/icgtit/>

Program



The 1st International Conference on Gas Turbines and Industrial Turbomachinery - [ICGT&IT 2022](#) -
Djelfa on 19-20 November 2022, Algeria



19 / 11 / 2022 : Afternoon: Oral Sessions



	Session 1	Session 2	Session 3 in Visio
Chairs	Pr Hachi B. E.K and Dr Bradai R.	Dr Khireddine A. and Dr Mhamedi B.	Dr Merzoug I. and Dr Iratni A.
13h45 - 14h00	ID.17 Mohamed Benkettar, Mouloud Guemana, Mourad Bachene, Estimate of reliability of gas turbine by using Weibull distribution	ID.23 Bachir Alili, Nouar Hachi, Naima Sofi, Ameur Miloud Kaddouri, Salam Abudura, Reliability analysis of industrial gas turbine using Weibull distribution	ID.35 Naima Benaouda, Ahmed Hafaifa, Khaldi Belgacem Said, Effects of height ambient temperature on the performance of a gas turbine-based cogeneration system
14h00 - 14h15	ID.25 Youcef Mahroug, Mouloud Guemana, Naima Sofi, Salam Abudura, Ahmed Hafaifa, Nonlinear Dynamics and Stability Analysis of a Heavy-duty gas turbine	ID.24 Abdelhafid Benyounes, Chakour Chouaib, Ahmed Hafaifa, Obaid S. Alshammari, Ilhami Colak, Prediction of gas turbine performance using machine learning regression methods from real operational data	ID.21 Boughezala Hamad Haithem, Kouider Laroussi, Improving sliding mode controller of five phase permanent magnet synchronous motor by integral of sliding surface
14h30 - 14h45	ID.31 Bettayeb M. , Boufridi T. , Sebti A., Etude de la fissuration dans les disques du rotor de turbine à vapeur	ID.13 Merouane Alaoui, Khaldi Belgacem Said, Ahmed Hafaifa, Mouloud Guemana, Stability analysis of vibrations of a gas turbine in order to determine the equilibrium points of the limit cycles under the effect of internal and external forces	ID.7 Nabil Sahli, The use of Deep Learning and artificial intelligence for gas industry
14h45 - 15h00	ID.45 Cheikh Kezrane, Hocine Bensalem, Ahmed Lamine Boukhalkhal, Sami Chaba. Carbon dioxide capture using heat cascade of a solar-powered ORC.	/	ID.8 Tarek Kebabsa, Karima Smili, Une étude comparative entre EMD et la cyclostationnarité pour l'identification des défauts d'un turbomachine
15h00 – 15h15	Coffee break		





NİŞANTAŞI
ÜNİVERSİTESİ

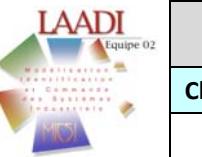
University of Djelfa 17000 DZ Algeria
URL: <http://www.univ-djelfa.dz/icgtit/>

Program



The 1st International Conference on Gas Turbines and Industrial Turbomachinery - [ICGT&IT 2022](#) -
Djelfa on 19-20 November 2022, Algeria

19 / 11 / 2022: Afternoon: Poster Sessions



	Session 1	Session 2	Session 3
Chairs	Dr Rouini A. and Aidaoui L.	Dr Laroussi K. and Dr A. Rabehi	Dr Kadouri A.M and Dr Bachene M.
15h00-15h30	ID.6 Amar Regaz, Larbi Boukezzi, Boubakeur Zegnini, Djellali Mahi, Multi-layered composite material for BRBs Defects diagnosis in induction motor	ID.33 Serradj Halima, Benmansour Toufik, Analyse du comportement vibratoire d'un arbre tournant en matériaux composite	ID.4 Zakaria Zemali, Nadji Hadroug , Lakhmissi Cherroun, Fault detection and isolation based on artificial intelligence techniques for a wind turbine
	ID.43 Bachir Alili, Ameur Miloud Kaddori, Ahmed Hafaifa, Obaid S. Alshammary, Ilhami Colak, Balancing and vibration analysis of gas turbine : GE MS3002 Gas turbine	ID.41 Ahmed Elottri, Lakhdar Mazouz, Abdellah Kouzou, Ali Teta and Fatima Boutouta, Harmonic currents mitigation using different control strategies of shunt active power filter	ID.36 Tarek Idris Bisker, Nadji Hadroug, Abdellah Kouzou, Nabil Derbel, Fault detection of an anti-surge system of a gas compression process based on the wavelet transformation
	ID.5 Ebar Mohammed, Ahmed Zohair Djeddi, Cherrak Naas, Evaluation of gas turbine's reliability by Johnson SB Distribution	ID.40 Fatima Boutouta, Abdellah Kouzou, Abdelkader Beladel, Maissa Medkour and Ahmed Elottri, Comparative Study between two-level and three-level NPC voltage source inverters used in photovoltaic systems for grid-tied Applications	ID.16 Lahcene Noureddine, Ahmed Hafaifa, Ameur Miloud Kaddouri, Abdellah Kouzou, Speed Control of Induction Motor Using Fractional Order PI Controller
	ID.34 Mohamed Ben Rahmoune, Abdelhamid Iratni, Ahmed Hafaifa, Gas turbine monitoring using artificial neural networks approach	ID.30 Youcef Mahroug, Mouloud Guemana, Ahmed Hafaifa, Identification of vibration behavior of a heavy-duty gas turbine using ARMAX model	/
15h40 Leaving Time	Touristic visit to Djelfa City		





NİŞANTAŞI
ÜNİVERSİTESİ

University of Djelfa 17000 DZ Algeria
URL: <http://www.univ-djelfa.dz/icgtit/>

Program



The 1st International Conference on Gas Turbines and Industrial Turbomachinery - [ICGT&IT 2022](#) -
Djelfa on 19-20 November 2022, Algeria

20/ 11 / 2022



Workshop Session 1	
Overview on gas turbine controls and diagnostics	
09 h 00 – 09h 45	Mr Azazga Rafiq Groupement SONATRACH-ENI (GSE), Hassi Messaoud, Division Associations, Sonatrach Chairs : Prof Salam Abudura and Dr Lakhder Mazouz
Coffee break	
Workshop Session 2	
10 h 15 – 10h 45	Sonatrach SC3 gas compression station presentation: Problems encountered and solution made Mr Aloui Merouan Sonatrach SC3 gas compression station, Mudjbara Djelfa Chairs : Prof Guemana Mouloud and Prof Abdelhalim Tlemçani
11 h 00 – 11 h 30	Closing Ceremony
12 h 00	Lunch

