

ICNDT
2017

**14th International Conference
Application of Contemporary Non-Destructive Testing in Engineering**

**4th – 6th September 2017
St. Bernardin/Portorož, Slovenia**



University of Ljubljana



Faculty of Mechanical Engineering



Monday, 4th SEPTEMBER

18.00 – 20.00	REGISTRATION	
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Tuesday, 5th SEPTEMBER

8.00 – 10.00	REGISTRATION	
9.00 – 9.30	WELCOME AND OPENING ADDRESS	
	KEYNOTE LECTURE	
9.30 – 10.20	SIGNAL PROCESSING FOR NONLINEAR NDT AND ACOUSTIC EMISSION: NEW TRENDS FOR FUTURE STANDARDIZATION Dr. Serge Dos Santos, Dr. Giuseppe Nardoni	
SESSION 1: ULTRASONIC TESTING 1		
10.20 – 10.40	THEORETICAL AND EXPERIMENTAL STUDIES OF GUIDED WAVES PROPAGATION IN DRY AND ONE-SIDE IMMERSSED WAVEGUIDES WITH SURFACE INHOMOGENEITIES M.V. Golub, J. Moll, A.N. Shpak, P. Malinowski, T. Wandowski, W.M. Ostachowicz	
10.40 – 11.00	UNDERSTANDING THE PROPAGATION OF GUIDED ULTRASONIC WAVES IN UNDATED COMPOSITE PLATES Bibi I.S., Murat, P. Fromme	
11.00 – 11.20	COFFEE BREAK & POSTER SESSION & EXHIBITION	
SESSION 2: ULTRASONIC TESTING 2		
11.20 – 11.40	SAFETY, QUALITY AND RELIABILITY – ULTRASOUND IMPLEMENTATION Jovan Jovanović, Željko Dobranović, Danko Dobranović	
11.40 – 12.00	ULTRASONIC C-SCAN TESTING OF EPOXY/GLASS FIBER COMPOSITE Zoran Bergant, Joseph Janez, Janez Grum	
12.00 – 12.20	STANDARDS FOR ACOUSTO-MECHANICAL EVALUATION OF MULTISCALE HYSTERETIC PROPERTIES OF COMPLEX MATERIAL WITH NONLINEAR TIME REVERSAL IMAGING Serge Dos Santos, Martin Lints, Denis Arruga, Ali Masood, Andrus Salupere	
12.20 – 12.40	DEVELOPMENT OF AN EDUCATION AND TRAINING PROGRAMME TO TEST PIECES BY MEANS OF TOFD AND PHASED ARRAY TECHNIQUES R. Rodríguez, J. Gallardo, B. Romero, E. Romero	
12.40 – 13.00	FEASIBILITY OF AN ACOUSTIC EMISSION BASED STRUCTURAL HEALTH MONITORING FOR RAILWAY AXLE UNDER FRETTING FATIGUE DAMAGE Michele Carboni, Andrea Gianneo	
13.00 – 14.00	LUNCH	
SESSION 3: RADIOGRAPHY		SESSION 4: COMPOSITES 1
14.00 – 14.20	ON THE WAY TO DIGITAL RADIOGRAPHY Brigitta Kelenföldi, József Harnisch	CRACK PROFILE RECONSTRUCTION OF CFRP-CFRP BONDED JOINTS FROM OPTICAL BACKSCATTER REFLECTOMETRY AND COMPARISON WITH X-RAY COMPUTED TOMOGRAPHY Andrea Gianneo, Michele Carboni, Andrea Bernasconi
14.20 – 14.40	A NEW IMAGE PROCESSING TOOL FOR DETECTION OF DEFECTS IN RADIOGRAPHIC IMAGES C. Harmansh, N. Seylan, V. Sozeri, F.Z. Biber Muftuler, M Karatay, A. Dogru	THE EVALUATION OF THE SURFACE ENERGY OF THE LIGNOCELLULOSES COMPOSITE EXPOSED TO UV RADIATION Mariana Domnica Stanciu, Rozina Steigmann, Cristina Valcea
14.40 – 15.00	RAY-TRACING CAMERA MODEL FOR PRECISE THREE-DIMENSIONAL MEASUREMENTS USING A PRISM-BASED ENDOSCOPIC PROBE A.V. Gorevoy, A.S. Machikhin	INFLUENCE OF DETECTION ACCORDING TO MOISTURE DISTRIBUTION OF CFRP COMPOSITE SANDWICH PANELS USING INFRARED THERMOGRAPHY HeeSang Park, ManYong Choi, JeongHak Park, KooAhn Kwon, HynChul Jung
15.00 – 15.20	AUTOMATED REMOTE COMPUTER MONITORING OF ENVIRONMENTALLY HAZARDOUS PRODUCTS Kovshov Evgeny, Kosach Alisa	THE EVALUATION OF VISCO-ELASTIC BEHAVIOUR OF COMPOSITES REINFORCED WITH GLASS FIBERS SUBJECTED TO COMPRESSION M.D. Stanciu, H. D. Teodorescu, D. Roşu, R. Steigmann, G.S. Dobrescu, A. Savin
15.20 – 15.40	OPTICAL DETECTION OF SHORT COLLISION TIMES J. Rus, T. Požar, R. Petkovšek	EDDY CURRENT NOTEBOOK AND SMARTPHONE APPS Gerhard Mook, Yury Simonin
15.40 – 16.00	COFFEE BREAK & POSTER SESSION & EXHIBITION	
SESSION 5: MAGNETIC TESTING 1		SESSION 6: COMPOSITES 2
16.00 – 16.20	TECHNOLOGICAL STATUS OF LED TECHNIQUES - APPLICATION IN NON DESTRUCTIVE TESTING WITH SPECIAL EMPHASIS ON MAGNETIC PARTICLE, PENETRANT, VISUAL AND THERMOGRAPHIC INSPECTION Rainer Link, Andrej Ivankov, Nathanael Riess	QUALITATIVE MEASUREMENT OF MOISTURE ABSORPTION IN GFRP UTILIZING ELECTROMAGNETIC INDUCTION Wataru Matsunaga, Koichi Mizukami, Yoshihiro Mizutani, Akira Todoroki, Yoshiro Suzuki
16.20 – 16.40	NONDESTRUCTIVE MONITORING OF PEARLITE DEGRADATION IN MEDIUM CARBON STEELS BY MAGNETIC BARKHAUSEN NOISE METHOD C. Hakan Gür	MONITORING TECHNIQUES OF YTTRIA STABILIZED ZIRCONIA USED AS THERMAL BARRIER COATING A.Savin, M.L. Craus, V. Turchenko, F. Novy, A.C. Mocanu, M. Soare, J. Grum, O.S. Doroshkevich
16.40 – 17.00	INFLUENCE OF LIFT OFF EFFECTS ON MAGNETIC BARKHAUSEN NOISE MEASUREMENTS PERFORMED WITH A COMPACT SENSOR UNIT Boštjan Pečnik, Roman Šturm, Janez Grum	REVEALING THE STRESSES-NEW APPROACH FOR INDUSTRIAL SAFETY, RELIABILITY AND RESIDUAL LIFE ASSESSMENT Isaac Einav
17.30	EXCURSION + DINNER	

Wednesday, 6th SEPTEMBER

8.00 – 16.00	REGISTRATION
SESSION 7: EDDY CURRENT	
9.00 – 9.20	APPLICATION OF DOUBLE DIFFERENTIAL TYPE EDDY CURRENT PROBES FOR GAS TURBINE COMPONENT INSPECTION G. Nardoni, V. Uchanin, P. Nardoni
9.20 – 9.40	EDDY CURRENT METHOD FOR EVALUATION OF STRESSES IN STEEL COMPONENTS V. Uchanin, S. Minakov, G. Nardoni, O. Ostash, M. Bentoglio
9.40 – 10.00	NEW EDDY CURRENT ONE-CHANNEL ARRAY PROBE FOR EFFICIENT INSPECTION OF TUBE FORGINGS V. Uchanin, G. Nardoni, P. Nardoni, M. Bentoglio
10.00 – 10.20	NEW POSSIBILITIES on TRAINING of NDT PERSONNEL H. İlker Yelbay, C. Hakan Gür, Ertuğrul Yilmaz
10.20 – 10.40	IDENTIFICATION OF MACROSCOPIC LATERAL DAMAGES IN RC SLABS WITH RAINY INDUCED ELASTIC WAVEACTIVITY T. Shiotani, T. Nishida, H. Asaue, K. Hashimoto, H. Takamine, K. Watabe, M. Fukuda,
10.40 – 11.00	COFFEE BREAK & POSTER SESSION & EXHIBITION
SESSION 8: ACOUSTIC EMISSION 1	
11.00 – 11.20	TIME REVERSAL LOCALIZATION OF CONTINUOUS AND BURST ACOUSTIC EMISSION UNDER NOISE BACKGROUND Zdenek Prevorsky, Josef Krofta, Jan Kober, Milan Chlada
11.20 – 11.40	CONDITION MONITORING OF PNEUMATIC CYLINDERS BY ACOUSTIC EMISSION Houssam Mahmoud, Pavel Mazal, Frantisek Vlasic, Miroslav Jana
11.40 – 12.00	INFLUENCE OF MEDIA DEGRADATION ON THE ANALYSIS OF ACOUSTIC EMISSION SIGNALS L. Calabrese, M. Galeano, E. Proverbio, D. Di Pietro, A. Donato, F. Cappuccini
12.00 – 12.20	CRACK DETECTION IN INJECTION MOLDS Tomaž Kek, Dragan Kusić, Janez Grum
12.20 – 12.40	ANALYSIS OF CONSTRUCTIONAL CONCRETE BY THE ACOUSTIC EMISSION METHOD ON MULTIPLE LOADING Michaela Hoduláková, Libor Topolář, Jaroslav Smutný, Luboš Pazdera, Karel Mikulášek
12.40 – 13.00	NEW ADVANCES ON STRESS MONITORING IN FERROMAGNETIC STEELS Evangelos Hristoforou, Aphrodite Ktena, Polyxeni Vourna, Eleni Mangiorou
13.00 – 14.00	LUNCH
SESSION 9: ACOUSTIC EMISSION 2	
14.00 – 14.20	APPLICATION OF ACOUSTIC EMISSION TO PREDICT CORROSION Mohamad Ghazi Droubi, Nadimul Haque Faisal
14.20 – 14.40	ACOUSTIC EMISSION DURING QUENCHING OF STEEL Bor Mojškerč, Tomaž Kek, Janez Grum
14.40 – 15.00	EVALUATION OF THREE POINT BENDING TEST ON DIFFERENT FINE-GRAINED COMPOSITES USING ACOUSTIC EMISSION METHOD L. Pazdera, L. Topolar, J. Smutny, M. Hodulakova, K. Mikulasek
15.00 – 15.20	ANALYSIS OF ns-LASER PEENING EFFECT ON CORROSION BEHAVIOUR BY ACOUSTIC EMISSION Uroš Trdan, Janez Grum
15.20 – 15.40	COFFEE BREAK & POSTER SESSION & EXHIBITION
SESSION 3: ACOUSTIC EMISSION 3	
15.40 – 16.00	DAMAGE ASSESSMENT OF NOVEL PRE-FABRICATED CONCRETE ELEMENTS BASED ON ACOUSTIC EMISSION MEASUREMENTS AND KAISER/FELICITY EFFECT ANALYSIS Tsangouri Eleni, G. Livitsanos, O. Remy, D.G. Aggelis
16.00 – 16.20	ULTRASONIC TESTING AND MAGNETIC MEMORY METHOD FOR INSPECTION OF DAMAGE IN HYSTERETIC DAMPERS SUBJECTED TO CYCLIC LOADING Chihab Abarkane, David Gale-Lamuella, Elisabet Suarez, Antolino Gallego, Amadeo Benavent-Climent, Václav Svoboda, Eva Svobodová
16.20 – 16.40	ACOUSTIC EMISSION SOURCE LOCALIZATION BASED ON EXACT GEODESIC CURVES (WITH APPLICATION TO WATERING CAN) Petr Galis, Vaclav Kus, Milan Chlada
16.40 – 17.00	COFFEE BREAK & POSTER SESSION & EXHIBITION
17.00 – 17.20	MORE EFFECTIVE AND SAFER DETECTION MEDIA APPLICATION IN MAGNETIC PARTICLES INSPECTION Y.Yaremenko
17.20 – 17.40	DEVELOPMENTS IN 2D AND CT X-RAY INSPECTION OF LIGHT ALLOY CASTINGS FOR PRODUCTION Jan Schache, Dr. Oliver Brunke
17.40 – 18.00	COMPUTER TOMOGRAPHY HAS ARRIVED IN AN AUTOMATED INSPECTION PROCESS COMBINING MATERIAL AND GEOMETRY ANALYSES Nikita Fedorov, Benjamin Becker
18.00 – 18.20	CONCLUSION
POSTER SESSION & EXHIBITION	
NONDESTRUCTIVE EVALUATION OF WELD PART OF POLYETHYLENE PIPES BY MICROWAVE J. S. Lee, H.T. Lim, K.B. Kim, Y.I. KIM	
SHAPE RECOGNITION AND SIZING OF PLANAR CRACK FROM TIP DIFFRACTION ECHOES BY USING PHASED ARRAY ULTRASONIC TEST INSTRUMENT Kim Young-Gil, Wonjae Choi, Kibok Kim	
ULTRASONIC DISBOND DETECTION IN ADHESIVE JOINTS Bor Mojškerč, Tomaž Kek, Janez Grum	
POSSIBILITIES OF AUTOMATIC INSPECTION ON THE HOLLOW AXLES Viktor Jemec, Janez Gorše, Janez Grum	