

PROGRAMME (TIME: CEST)



25.05.2021

15.00 - 17.00 - A (virtual) walk in Torino ([LINK](#))

28.05.2021

09:00 - 09:30: Invited: Donato Firrao

09:30 - 10:30: Session 9 (Hybrid). Chair: Berto

10:30 - 11:00: Coffee Break

11:00 - 12:30: Session 10 (Hybrid). Chair: Restuccia

12:30 - 14:00: Virtual Lunch

14:00 - 16:00: Session 11 (Remote). Chair: Di Cocco

16:00 - 16:30: Virtual Coffee Break

16:30 - 18:30: Session 12 (Remote). Chair: Bellini

26.05.2021

08:50 - 09:00: Welcome

09:00 - 10:30: Session 1 (Virtual). Chair: Vantadori

10:30 - 11:00: Virtual Coffee Break

11:00 - 12:30: Session 2 (Virtual). Chair: Razavi

12:30 - 14:00: Virtual Lunch

14:00 - 14:30: Invited: José Antonio Correia

14.30 - 16:00: Session 3 (Hybrid). Chair: Di Cocco

16:00 - 16:30: Coffee Break

16:30 - 18:30: Session 4 (Hybrid). Chair: Spagnoli

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09:30 - 10:30: Session 13 (Remote). Chair: G. Ferro

10:30 - 11:00: Virtual Coffee Break

11:00 - 12:30: Session 14 (Remote). Chair: Firrao

12:30 - 14:00: Virtual Lunch

14:00 - 16:00: Session 15 (Remote). Chair: Maletta

16:00 - 16:30: Virtual Coffee Break

16:30 - 18:00: Session 16 (Remote). Chair: P. Ferro

18:00 - 18:10: Closing

27.05.2021

08:50 - 09:00: Opening

09:00 - 09:30: Invited: Liviu Marsavina

09:30 - 10:30: Session 5 (Hybrid). Chair: Bertolin

10:30 - 11:00: Coffee Break

11:00 - 12:30: Session 6 (Hybrid). Chair: Spagnoli

12:30 - 14:00: Lunch

14:00 - 16:00: Session 7 (Hybrid). Chair: Risitano

16:00 - 16:30: Coffee Break

16:30 - 17:30: Session 8 (Hybrid). Chair: Berto

17:30 - 19:00: Assemblea dei Soci IGF

19:30 - 21:30: Social dinner

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09:00 - 10:30: Session 1 (Virtual). Chairperson: Sabrina Vantadori. **DISCUSSION**



IGF26

09:00 – 09:10	Víctor Martínez, Sergio Cicero, Borja Arroyo	2: Effect of graphene on the fracture behaviour of 3D printed PLA SENB specimens	https://youtu.be/XyIhMN0_LbM
09:10 – 09:20	Alexey Fedorenko, Boris Fedulov, Sergey Jurgenson, Evgeny Lomakin	20: 3D lattice-based structural elements for industrial application	https://youtu.be/x7IZ3eNIoOw
09:20 – 09:30	Zhuo Xu, Elena Medori, Fabrizio Sarasini, Seyed Mohammad Javad Razavi	78: Quasi-static behavior of 3D printed lattice structures of various scales	https://youtu.be/Ie3IgsLiiko
09:30 – 09:40	Drazan Kozak, Katarina Monkova, Marina Franulovic, Darko Damjjanovic, Petar Monka, Dorian Turk, David Liovic	85: Finite element analysis of ABS printed lattice structure	https://youtu.be/i8wDktIFNt0
09:40 – 09:50	Tomas Doktor, Tomas Fila, Petr Zlamal, Petr Koudelka, Daniel Kytyr, Ondrej Jirousek	115: Effect of polymeric fillers on Poisson's function of additively manufactured auxetics	https://youtu.be/JIH_Y0o3cAM
09:50 – 10:00	T. Hachimi, F. Majid, N. Naboulsi, R. Rhanim, N. Zekriti, H. Rhanim	172: Design and manufacturing of a 3D printer filaments extruder	https://youtu.be/YFMxIN2asak
10:00 – 10:10	N. Naboulsi, F. Majid, T. Hachimi, R. Rhanim, N. Zekriti, H. Rhanim	173: Modeling and control of 3D filament extruder	https://youtu.be/VhvVyNP1AWM
10:10 – 10:20	Marcos Sánchez, Sergio Cicero	62: Multi-wall carbon nanotubes do not seem to improve the fracture behaviour of the epoxy matrix	https://youtu.be/mhICtryCICw
10:20 – 10:30	Zhuo Xu, Rakel Fostervold, Seyed Mohammad Javad Razavi	74: Scale effect on the mechanical behavior of PLA specimens fabricated via Fused Deposition Modeling	https://youtu.be/mZQQBFkQGhM

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11:00 - 12:30: Session 2 (Virtual). Chairperson: Javad Razavi. **DISCUSSION**



IGF26

11:00 – 11:10	Zhuo Xu, Rakel Fostervold, Seyed Mohammad Javad Razavi	75: Thickness effect on the mechanical behavior of PLA specimens fabricated via Fused Deposition Modeling	https://youtu.be/rH9ZIWE2mo0
11:10 – 11:20	Jamaloddin Jamali, Ahmad Ashknani, Ali Al-Kanderi, Fajer Hussain	77: Mode I Fracture Testing of polymers	https://youtu.be/Mn-8SVKk8BU
11:20 – 11:30	Elvira Wahyu Arum Fanani, Eko Surojo, Aditya Rio Prabowo, Dody Ariawan, Hammar Ilham Akbar	Recent Development in Aluminum Matrix Composite Forging: Effect on the Mechanical and Physical Properties	https://youtu.be/ewRZIKXVA3A
11:30 – 11:40	R.N.F. Brito, R.D.S.G. Campilho, R.D.F. Moreira, I.J. Sanchez-Arce	166: Composite stepped-lap adhesive joint analysis by cohesive zone modelling	https://youtu.be/ih4hAtVkaIY
11:40 – 11:50	F. Furgiuele, C. Maletta, M. Tului, R.J.K. Wood	164: Wear behavior of cold sprayed Stellite-6 coatings during reciprocated dry sliding	https://youtu.be/vlZjCPD3gTU
11:50 – 12:00	A. Mondal, D. Pilone, A. Brotzu, F. Felli	176: Effect of heat treatment on mechanical properties of FeMnAlC alloys	https://youtu.be/ACw9dQNdfz4
12:00 – 12:10	L. Mingazzi, F. Freddi	15: Phase-field simulations of cover cracking in corroded RC beams	https://youtu.be/xRCXCQqFKiE
12:10 – 12:20	N. Vaysfeld, O. Pozhylenkov	50: Stress state of an elastic rectangular domain under steady load	https://youtu.be/rIrayH0MK1Y
12:20 – 12:30	Mikhail Sh Nihamkin, Danil G. Solomonov	112: Fatigue damage accumulation in laminated carbon/epoxy plastics	https://youtu.be/ILvaMZ4xItU

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14:00 - 16:00: Session 3 (Hybrid). Chairperson: Vittorio Di Cocco. **DISCUSSION**



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14:00 – 14:30	José Antonio Correia	INVITED: An Overview of Fatigue Strength Modelling - Global and Local Approaches	https://youtu.be/WfZ_6ABKmcS
14:30 – 14:40	Riccardo Caivano, Andrea Tridello, Davide Paolino, Filippo Berto	63: Defect-Driven Topology Optimisation: TopFat algorithm extended to commercial software for wide-ranging applications	https://youtu.be/7AISkG95tOI
14:40 – 14:50	Panagiotis N. Lympropoulos, Efstathios E. Theotokoglou	64: Numerical investigation of pentamodes' crack propagation	https://youtu.be/kW9XA1YRSN4
14:50 – 15:00	G. Meneghetti, M Ricotta, M. Sorgato, M. Zappalorto	81: Notch effect in the tensile and compressive quasi-static behaviour of 40% short glass fibre - PPS reinforced composites	https://youtu.be/WxWu1DVv4Bw
15:00 – 15:10	Marco Maurizi, Chao Gao, Filippo Berto	99: Mechanical properties prediction of 2-D interlocking structures using deep-learning methods	https://youtu.be/rZ4eKJvNFuA
15:10 – 15:20	Domenico Ammendolea, Fabrizio Greco, Paolo Lonetti, Arturo Pascuzzo	128: An effective modeling approach based on the ALE and M-integral for simulating crack propagation under thermo-mechanical loadings.	https://youtu.be/wlEXNfeP3Iw
15:20 – 15:30	Stavros K. Kourkoulis, Christos F. Markides, Ermioni D. Pasiou	79: The critical influence of “tiny” geometrical details on the stress field in a Brazilian Disc with a central notch of finite width and length	https://youtu.be/DXEd3xfSSVo
15:30 – 15:40	Mikhail Tretyakov, Valerii Wildemann	135: Computational and experimental study of strain localization processes on the postcritical stage of deformation	https://youtu.be/3TPgeZDza4Q
15:40 – 15:50	M. R. Tyutin, L.R. Botvina, A.V. Ioffe	139: Effects of long-term operation on mechanical and physical characteristics of structural materials	https://youtu.be/DtJTX5PWXqU
15:50 – 16:00	Pietro Tonolini, Lorenzo Montesano, Annalisa Pola, Ettore Landriani, Marcello Gelfi	144: The effect of laser-cladding on the wear behavior of gray cast iron disc brake	https://youtu.be/xNZpqxx0Hg8

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16:30 - 18:30: Session 4 (Hybrid). Chairperson: Andrea Spagnoli. **DISCUSSION**



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16:30 – 16:40	Costanzo Bellini, Filippo Berto, Vittorio Di Cocco, Francesco Iacoviello, Larisa Patricia Mocanu, Javad Razavi	5: Additive Manufacturing processes for metals and effects of defects on mechanical strength: a review	https://youtu.be/fJBn5eZN3ts
16:40 – 16:50	N. Della Ripa, D. S. Paolino, A. A. Morese, A. Tridello	134: Numerical modelling of the mechanical response of lattice structures produced through AM	https://youtu.be/-dDmfOyZCbY
16:50 – 17:00	R. Brighenti, A. Spagnoli, M. Terzano, M.P. Cosma	131: Fracture of polymeric materials: linking continuum and molecular models	https://youtu.be/-bRZivn7f-k
17:00 – 17:10	Andrea Spagnoli, Riccardo Albertini, Michele Terzano, Edoardo Raposio	69: Computational mechanical modeling of human skin for the simulation of reconstructive surgery procedures	https://youtu.be/ykHfgFnISfl
17:10 – 17:20	A. Sapore, G. Efremidis, P. Cornetti	71: Comparison between two nonlocal criteria: A case study on pressurized holes	https://youtu.be/JYmCKh8UgFE
17:20 – 17:30	Dario Santonocito, Giacomo Risitano, Fabiana Nicita, Gabriele Cervino, Dario Milone	148: Finite Element Analysis of OT Bridge Fixed Prosthesis System	https://youtu.be/YyUUVICUtpk
17:30 – 17:40	R.V.F. Faria, R.D.S.G. Campilho, P.J.A. Goncalves, R.J.B. Rocha, I.J. Sanchez-Arce	167: Numerical analysis by XFEM of hybrid T-peel joints	https://youtu.be/09430g4AX0c
17:40 – 17:50	Slobodanka Boljanović, Andrea Carpinteri	168: Evaluation of driving mode progression coupled with overload effect	https://youtu.be/Xc5pL1sZ_2E
17:50 – 18:00	Hana Simonova, Martin Lipowczan, Iva Rozsypalova, Petr Danek, David Lehky, Pavla Rovnanikova, Zbynek Kersner	14: Fracture parameters of alkali-activated aluminosilicate composites with ceramic precursor: durability aspects	https://youtu.be/BkzhQM49fMk
18:00 – 18:10	Eleonora Congiu, Giuseppe Carlo Marano, Bruno Brisighella, Luigi Fenu, Mariangela Deligia	16: Structural optimization of Composite Steel Trussed-Concrete Beams	https://youtu.be/S26_3jS9Vrs
18:10 – 18:20	Derouiche Sami, Bouziane Salah, Bouzerd Hamoudi	17: Mixed Finite Element for Kinking Crack Analysis in an Orthotropic Media	https://youtu.be/iR3CXH9yxUg
18:20 – 18:30	L. Vigna, A. Calzolari, G. Galizia, G. Belingardi, D.S. Paolino	29: Effect of impact velocity and friction on the in-plane crashworthiness of composite plates	https://youtu.be/hawEjZ_H4f4

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09:00 - 10:30: Session 5 (Hybrid). Chairperson: Chiara Bertolin. **DISCUSSION**



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09:00 – 09:30	Liviu Marsavina	INVITED: The assessment of fracture in cellular materials	https://youtu.be/kNp7tnP0IJM
09:30 – 09:40	Costanzo Bellini, Vittorio Di Cocco, Francesco Iacoviello, Larisa Patricia Mocanu	76: CFRP/aluminium fibre metal laminates: numerical model for mechanical properties simulation	https://youtu.be/Ondq5rz2-08
09:40 – 09:50	Danilo D'Andrea, Alessandro Pistone, Giacomo Risitano, Dario Santonocito, Lorenzo Scappaticci, Fabio Alberti	110: Tribological characterization of a hip prosthesis in Si3N4-TiN ceramic composite made with Electrical Discharge Machining (EDM)	https://youtu.be/wpEIo8IthgM
09:50 – 10:00	Andrea Pranno, Umberto de Maio, Fabrizio Greco, Raimondo Luciano, Lorenzo Leonetti	141: Stability analysis at the micro- and macro-scales in periodic bioinspired composites	https://youtu.be/1pvobzvaxjw
10:00 – 10:10	Elio Matteo Curcio, Stefano Rodinò, Carlo Greco, Emanuele Sgambitterra, Pietro Magarò, Carmine Maletta	159: Shape memory alloy reinforced composites: functional and structural response induced by thermal activation	https://youtu.be/JeGi87uDlfw
10:10 – 10:20	Umberto de Miaio, David Cendon, Fabrizio Greco, Lorenzo Leonetti, Paolo Nevone Blasi, Andrea Pranno	6: Finite element analysis of concrete cracking: a comparative study between a refined diffuse interface model and an embedded crack model	https://youtu.be/c2MpQFFsP0w
10:20 – 10:30	Valerii Matveenko, Natalia Kosheleva, Grigorii Serovaev, Georgii Gusev	31: On application of distributed FOSs embedded into material for the mechanical state monitoring of civil structures	https://youtu.be/g6nhTrHMTNo

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11:00 - 12:30: Session 6 (Hybrid). Chairperson: Andrea Spagnoli. **DISCUSSION**



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11:00 – 11:10	Fabrizio Pittau, Fabio Doveri, Mario Lucio Puppio, Fausto Mistretta, Mauro Sassu	32: Experimental tests on vapor and gas permeability of concrete boxes	https://youtu.be/A8ztg5wVAWw
11:10 – 11:20	Anas Ibraheem, Yulia Pronina	73: Accounting for shallow foundation settlement in the analysis and design of multi-storey frame buildings: development of a new software package	https://youtu.be/OPPfHH8sOKY
11:20 – 11:30	Michal Vyhlidal, Iva Rozsypalovam Hana Simonova, Barbara Kucharczykova, Leona Vavro, Martin Vavro, Jiri Nemecek, Pavla Rovnanikova, Zbynek Kersner	80: Influence of rock inclusion composition on fracture response of cement composite specimens	https://youtu.be/i0NzfJbQtmQ
11:30 – 11:40	H. Suiffi, A. El Maliki, M. Dalal, O. Cherkaoui	84: Study of the durability of a concrete composite mixed with polypropylene fibers	https://youtu.be/Wpd3Mky4MMw
11:40 – 11:50	D.Triantis, I. Stavrakas, A. Loukidis, E.D. Pasiou, S.K.Kourkoulis	116: Exploring the acoustic activity in marble specimens under tension while entering into the stage of impending fracture	https://youtu.be/_chHJLDnJqY
11:50 – 12:00	Evgeny Lomakin, Boris Fedulov	28: Limit plastic state of notched solids with properties dependent on the type of external forces	https://youtu.be/feQSeYqEnWE
12:00 – 12:10	R. Branco, J.D. Costa, P. Prates, F. Berto	48: A cyclic elastic-plastic SED framework for fatigue life assessment in notched components subjected to multiaxial loading	https://youtu.be/YdtVIVNARzk
12:10 – 12:20	Yury Matvienko, Vladimir Pisarev, Svyatoslav Eleonsky	58: Low-cycle fatigue damage accumulation near cold-expanded hole by secondary hole drilling data	https://youtu.be/28rtS2VAX80
12:20 – 12:30	P. Ferro, A. Fabrizi, F. Bonollo, F. Berto	45: Influence of aluminium casting alloys chemical composition on the interaction with a 304L stainless steel insert	https://youtu.be/7RQ_qVhxi6U

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14:00 - 16:00: Session 7 (Hybrid). Chairperson: Giacomo Risitano. **DISCUSSION**



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14:00 – 14:10	Irina A. Evstafeva, Yulia G. Pronina	72: A thin-walled pipe exposed to corrosion under pressure and nonuniform heating	https://youtu.be/PvJVNPJzjzs
14:10 – 14:20	G. Mariggio, S. Dalle Vacche, R. Bongiovanni, M. Corrado	113: Analysis of the durability of a functional coating against glass stress corrosion	https://youtu.be/i5Q6xpOufc8
14:20 – 14:30	C. Boursier Niuatta, A. Tridello, G. Belingardi, D. S. Paolino	118: An innovative nondestructive technique for the local assessment of residual elastic properties in damaged composites	https://youtu.be/Ij1M0WMG67E
14:30 – 14:40	Mohammad Azadi, Hanieh Aroo	171: Sensitivity analysis of stress, pre-corrosion, nano-particles and heat treatment on fatigue lifetime of aluminum alloy	https://youtu.be/ssT1G9qhXvI
14:40 – 14:50	Anna Fesenko, Nataly Vaysfel'd	52: The dynamical problem for the infinite elastic layer with a cylindrical cavity	https://youtu.be/IjsMmtMSoY
14:50 – 15:00	K. Mysov, N. Vaysfeld	65: The dynamical stress concentration near a cone-shaped crack in a twice-truncated elastic cone	https://youtu.be/1J5BFUNHZgU
15:00 – 15:10	N.A. Sazhenkov, M. Sh Nikhamkin, T. Stergiou, K.P. Baxevanakis	106: Experimental study of AlMg6 alloy mechanical and ballistic characteristics at different temperatures and loading speeds	https://youtu.be/_SWa8DK227k
15:10 – 15:20	S.V. Uvarov	126: Dynamic and quasistatic interlaminar shear strength of carbon fiber laminate under bi-axial loading conditions	https://youtu.be/JSOLrnyT5M0
15:20 – 15:30	Irina A. Bannikova, Sergey V. Uvarov	137: Scaling laws in fragmentation dynamics of rock materials	https://youtu.be/DhJC3HJPeeI
15:30 – 15:40	S. Schonborn, T. Meltz, C. Bleicher	18: Influence of compressed hydrogen on the fatigue behavior of a ferritic stainless steel	https://youtu.be/wy75NEC4MaM
15:40 – 15:50	Hryhoriy Nykyforchyn, Leonid Unigovskyi, Olha Zvirko, Oleksandr Tsyrunyk, Halyna Krechkovska	156: Pipeline durability and integrity issues at hydrogen transport via natural gas distribution network	https://youtu.be/_qMEno0Zbdk
15:50 – 16:00	F.V. Antunes, M.F. Borges, D.M. Neto, E.R.A. Sergio	117: Fatigue crack growth: residual stresses versus crack closure	https://youtu.be/sMxqsr68lds

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16:30 - 17:30: Session 8 (Hybrid). Chairperson: Filippo Berto. **DISCUSSION**



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16:30 – 16:40	Aprianur Fajri, Aditya Rio Prabowo, Eko Surojo, Fitriani Imaduddin, Jung Min Sohn, Ristiyanto Adiputra	37: Validation and Verification of Fatigue Assessment using FE Analysis: A Study Case on the Notched Cantilever Beam	https://youtu.be/NodmU9Ehxwk
16:40 – 16:50	Aprianur Fajri, Aditya Rio Prabowo, Nurul Muhayat, Dharu Feby Smaradhana, Aldias Bahatmaka	38: Fatigue Analysis of Engineering Structures: State of Development and Achievement	https://youtu.be/H69Daol7HNw
16:50 – 17:00	Vitor E. L. Paiva, José L. F. Freire, Giancarlo L. G. Bonzales, Ronaldo D. Vieira, Alexandre S. Ribeiro, Ana L.F.S. d'Almeida	49: Fatigue of buried dented pipeline specimens	https://youtu.be/ne4H2Li8ii0
17:00 – 17:10	Sabrina Vantadori, Camilla Ronchei, Daniela Scorza, Andrea Zanichelli	51: Evaluation of fatigue strength and estimation of lifetime of ductile cast irons under multiaxial loading	https://youtu.be/dfmqnQ0EX-E
17:10 – 17:20	A. Chiocca, F. Frenzo, L. Bertini	114: Influence of residual stresses on the fatigue endurance of structural components	https://youtu.be/Vdam28XiL2g
17:20 – 17:30	Javad Razavi, Morten Jorgensen	119: Fatigue behavior of geometrically tailored components	https://youtu.be/5ZQzYgPNQrE

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09:00 - 10:30: Session 9 (Hybrid). Chairperson: Filippo Berto. **DISCUSSION**



09:00 – 09:30	Donato Firrao	INVITED: Plastic instability in the condition of pure shear. a fundamental instability of materials	
09:30 – 09:40	Andreas J. Brunner, Bamber Blackman, Laurent Warnet	133: 35 Years of Standardization and Research on Fracture of Polymers, Polymer Composites and Adhesives in ESIS TC4: Past Achievements and Future Directions	https://youtu.be/mh6FUMPddpA
09:40 – 09:50	Julio A. Ruiz, Vilchez, Gonzalo M. Dominguez Almaraz, Mario A., Sanchez Medina	121: Maraging 300 steel under ultrasonic fatigue tests at room temperature	https://youtu.be/5fnGtyhhGX4
09:50 – 10:00	Quingbo Wang, Chao Gao, Filippo Berto	130: Fatigue-resistant notched structure enabled by artificial intelligence	https://youtu.be/uyUDtZ9BSnQ
10:00 – 10:10	Danilo A. Renzo, Carmine Maletta, Emanuele Sgambitterra, Franco Furguele, Filippo Berto	132: Surface roughness effect on multiaxial fatigue behavior of additively manufactured Ti6Al4V alloy	https://youtu.be/W-9p0mFTci8
10:10 – 10:20	Pedro R. da Costa, Luis Reis, Manuel Freitas	153: Ultrasonic fatigue testing under biaxial stress states	https://youtu.be/MGdz6Tm0vTw
10:20 – 10:30	Lucas Braet, Petr Miarka, Stanislav Seitl	158: Nonlinear numerical study of stainless steel IPE80 profile for fatigue experiment	https://youtu.be/LjLl5bq_ZW8

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11:00 - 12:30: Session 10 (Hybrid). Chairperson: Luciana Restuccia. **DISCUSSION**



IGF26

11:00 – 11:10	Tea Marohnic, Robert Basan	169: Estimation of materials' parameters of strain-life fatigue behavior using empirical and artificial neural networks based approach	https://youtu.be/vI90l11k_Mo
11:10 – 11:20	V. Rizov	26: Effects of strain recovery on longitudinal fracture in continuously inhomogeneous viscoelastic beams	https://youtu.be/l0xhsJMFjw0
11:20 – 11:30	V. Rizov	27: Lengthwise fracture of functionally graded beams: a study of stress relaxation effects	https://youtu.be/sVSgNGYBBZY
11:30 – 11:40	Beibei Xiong	125: Experimental characterization of mortar with recycled PET aggregate: preliminary results	https://youtu.be/n0p-WllxjPU
11:40 – 11:50	A. M. Mirzaei, A. Sapore, M. Corrado, P. Cornetti	136: An analytical study on pure mode II debonding of composite-to-substrate joints by considering the residual strength	https://youtu.be/2WktKawEEpU
11:50 – 12:00	Vladimir Chmelko, Pavel Zlabek, Tomas Kosco, Marian Semes	60: Fatigue strength of weld joint of the gas pipelines	https://youtu.be/ibzVytZrgBE
12:00 – 12:10	R. Nobile, F. W. Panella, A. Pirinu, A. Saponaro	102: Bending residual strength of damaged Al foam sandwiches through UT and IRT analyses	https://youtu.be/I7pmBflyvgc
12:10 – 12:20	Zhen Wang, Andrea Manes	103: Investigation of the biaxial flexural fracture of aluminosilicate glass by smeared fixed crack method	https://youtu.be/DHcqEzqO4nE
12:20 – 12:30	A. Chao Correias, M. Corrado, A. Sapore, P. Cornetti	104: Size-effect on the apparent tensile strength of brittle materials with spherical cavities	https://youtu.be/2ez8BroPccI

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14:00 - 16:00: Session 11 (Virtual). Chairperson: Vittorio Di Cocco. **DISCUSSION**



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14:00 – 14:10	Pietro Foti, Seyed Mohammad Javad Razavi, Filippo Berto	109: Fracture assessment of U-notched PMMA under mixed mode I/II loading conditions by means of local approaches	https://youtu.be/2g6Dl_gU3pw
14:10 – 14:20	E. R. Sérgio, M. F. Borges, D. M. Neto, F. V. Antunes	122: Prediction of fatigue crack growth using a damage model	https://youtu.be/Krubwqnm44
14:20 – 14:30	Branislav Dordevic, Blagoj Petrovski, Aleksandar Sedmak, Drazan Kozak, Ivan Samardzic	87: Fracture behavior of reactor steel 20MnMoNi 55 in the transition temperature region	https://youtu.be/pddjxbeAMqs
14:30 – 14:40	Oleg Naimark	143: Fracture criteria and duality of critical damage-failure transitions.	https://youtu.be/rt6SSR0kQsU
14:40 – 14:50	O.S. Sedova, D.D. Okulova, Y.G. Pronina	155: The effect of surface defects interaction on the strength of a pressurized spherical shell	https://youtu.be/YeL.Gtb67qfk
14:50 – 15:00	A. Mondal, D. Pilone, F. Felli	177: Effect of dispersed particles on TiAl alloys fracture behaviour	https://youtu.be/ns2iWp_jqSs
15:00 – 15:10	Lucie Malikova, Petr Miarka, Pavel Doubek, Stanislav Seitl	147: Influence of the bi-material interface on the crack propagation through a thin protective layer	https://youtu.be/Vz9UAXCXuZU
15:10 – 15:20	Daniele Gaetano, Fabrizio Greco, Lorenzo Leonetti, Paolo Lonetti, Paolo Nevone Blasi	149: Numerical prediction of transverse cracking and delamination in fiber-reinforced laminates by using a two-scale cohesive finite element approach	https://youtu.be/i6jc0gKXAyQ
15:20 – 15:30	V. Rizov	25: Analysis of delaminated multilayered functionally graded viscoelastic beam	https://youtu.be/gBNw9tU1k-0
15:30 – 15:40	Ibrahim T. Teke, Mustafa Akbulut, Ahmet H. Ertas	91: Topology optimization and fatigue analysis of a lifting hook	https://youtu.be/-C9IXmf43Tk
15:40 – 15:50	V. Di Cocco, F. Iacoviello, C. Bellini, L. Mocanu	127: Cycling model for a NiTi Shape Memory Alloy Shape	https://youtu.be/GcJl0c6rCNM
15:50 – 16:00	Imam Abdul Majid, Fajar Budi Laksono, Hendri Suryanto, Aditya Rio Prabowo	41: Structural Assessment of Ladder Frame Chassis using FE Analysis: A Designed Construction referring to Ford AC Cobra	https://youtu.be/8M8eLBQz35M

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16:30 - 18:30: Session 12 (Virtual). Chairperson: Costanzo Bellini. **DISCUSSION**



16:30 – 16:40	J. L. González-Velazquez, E. Entezari	55: On the assessment of non-metallic inclusions by part 13 of API 579-1/ASME FFS-1 216	https://youtu.be/ChbwS1_BNG4
16:40 – 16:50	Yuwana Sanjaya, Aditya Rio Prabowo, Fitriani Imaduddin, Nur Azmah Binti Nordin	43: Assessment of a Designed Wheel Rim: A Convergence Study as Calibration Reference for Structural Analysis Using FEM	https://youtu.be/ucPPebH0w04
16:50 – 17:00	Julian Z.Andrade Lizarro, Stanislav Seitl, Petr Miarka	157: Mixed mode I/II fracture analysis of various concrete types	https://youtu.be/Hyl1UtlUcm8
17:00 – 17:10	Anass Gouya	4: Optimization of parameters on the failure stress behavior of strands using Taguchi's method	https://youtu.be/j9wKSQbm8Eo
17:10 – 17:20	Fedulov Boris, Fedorenk Alexey	19: Topology optimization with space orientation of reinforcement	https://youtu.be/oKNR2pZnWss
17:20 – 17:30	Carlos Mallor, Susana Calvo, José Luis Nunez, Rafael Rodriguez, Aitor Landaberea	83: On the use of probabilistic fatigue life estimation in defining inspection intervals for railway axles.	https://youtu.be/UqVN79xBRk4
17:30 – 17:40	Marcos Sanchez, Sergio Cicero, Borja Arroyo	3: Assessment of notched Polyvinyl chloride (PVC) tubular beams using the Theory of Critical Distances and Finite Element analysis	https://youtu.be/JR2MBgiVQG4
17:40 – 17:50	G. Saatsakis, D. Linardatos, G. Karpetas, N. Kalyvas, K. Ninos, A. Bakas, E. Lavdas, G. Fountos, I. Kandarakis, I. Valais, C. Michail	7: On the thermal response of LuAG:Ce single crystals	https://youtu.be/CFdp9zRPzvQ
17:50 – 18:00	Davide Palumbo, Rosa De Finis, Francesca Di Carolo, Umberto Galietti	34: Considerations on the Thermoelastic Effect in proximity of crack tips on Titanium and Aluminium: a new formulation	https://youtu.be/j5oeeUF9KvQ
18:00 – 18:10	Saki Hayashi, Tomoya Kawabata, Masayuki Yoshimoto, Masayuki Yamamoto	95: Embrittlement by Tramp Element and Determination of its Allowable Content for Electric Furnace Steels	https://youtu.be/10omgAF-F6w
18:10 – 18:20	Maria Beatrice Abrami, Lorenzo Montensano, Marialaura Tocci, Annalisa Pola, Marcello Gelfi	138: High temperature wear behavior of Al-Mg-Sc alloy produced by laser powder bed fusion	https://youtu.be/PbQci1PDEfM
18:20 – 18:30	Sergio Cicero, Sergio Arrieta	1: Some thoughts about the application of the Master Curve methodology to ferritic steels containing notches	https://youtu.be/SEhbFD-fluI

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09:00 - 10:30: Session 13 (Virtual). Chairperson: Vittorio Di Cocco. **DISCUSSION**



IGF26

09:00 – 09:10	Niki Martini, Vaia Koukou, Christos Michail, George Fountos	8: Dual energy X-ray method for kidney stones and atherosclerotic plaques structural integrity characterization	https://youtu.be/a4LCHmONvPE
09:10 – 09:20	Dionysios Linardatos, Vaia Koukou, Niki Martini, ANastasios Konstantinidis, Athanasios Bakas, George Fountos, Ioannis Valais, Christos Michail	9: Assessing the Information Content of a Non-Destructive Testing CMOS Imaging Detector	https://youtu.be/L5uZQE496Gg
09:20 – 09:30	Singgih Dwi Prasetyo, Iwan Istanto, Joung Hyung Cho, Aditya Rio Prabowo	42: Investigation of Sulfur Melter Heating Coil as an Industrial Product: A Study Case on Technical Design and Structural Inspection	https://youtu.be/3__OMdjDJK8
09:30 – 09:40	Muhammad Faiz Dzulfiqar, Aditya Rio Prabowo, Ridwan Ridwan, Haris Nubli	46: Assessment on the Designed Structural Frame of the Automatic Thickness Checking Machine – Validation in finite element method	https://youtu.be/oqYIYUWpsSc
09:40 – 09:50	Poorya Karvan, Seyed Mohammad Javad Razavi, Filippo Berto, Chiara Bertolin	54: Effect of Climate-Induced Parameters on Fracture Properties of Semi-Circular Coated Wooden Specimens Under Three-Point Bending	https://youtu.be/a-pdf0X_zXY
09:50 – 10:00	Fuzuli Agri Akcay	57: Prediction of Ductile Fracture Loci of Structural Steels and Aluminum Alloys Using KAEB Concept and MSS Criterion	https://youtu.be/FJNAiR1DINg
10:00 – 10:10	K. Kaklis, O. Saubi, R. Jamisola, Z. Agioutantis	61: A preliminary application of a machine learning model for the prediction of load variation in three-point bending tests based on the acoustic emission signals	https://youtu.be/YKmI6MIKK28
10:10 – 10:20	Toru Yagi, Yasuhito Imai, Tomoya Kawabata	96: Investigation of Pop-in Formation Mechanism in Fracture Toughness Test of Welded Joint and Improvement of Acceptance Criteria	https://youtu.be/kqviCBkkE18
10:20 – 10:30	A. Kansy, M. Kaynak C. Bleigher, H. Kaufmann	140: Investigation of the statistical and geometrical size effect on the fatigue strength of EN-GJL-300 under consideration of the graphite morphology	https://youtu.be/uC7CqwSw5Eo

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11:00 - 12:30: Session 14 (Virtual). Chairperson: Donato Firrao. **DISCUSSION**



IGF26

11:00 – 11:10	Sahand P. Shamchi, Behzad V. Farahani, Dongyuan Hu, Minqiang Jiang, Xiaosu Yi, Pedro M. G. P. Moreira	174: Influence of Electrical Modification on the Mechanical Properties of Carbon/Epoxy Laminates	
11:10 – 11:20	Tatyana Tretyakova	108: Estimation the influence of non-monotonic loading regimes on the Portevin – Le Chatelier effect in the Al-Mg alloy: experimental study by using the DIC-technique	https://youtu.be/L7kDKBzD62I
11:20 – 11:30	S. Mousa, A.A. Abd-Elhady, H. Sallam	120: Fracture behavior of cracked small punch test specimens made of Epoxy Reinforced by Hybrid Nanoparticles	https://youtu.be/nXWypHDt_kY
11:30 – 11:40	I. G. Oliveira, J. M. Pardal, J. A. F. O. Correira, L. S. Araujo, L. Benini, S. Tavares, F. Berto	178: Microstructural characterization of an ancient iron bridge in Brazil	https://youtu.be/Ii2EYHGmYq4
11:40 – 11:50	M.F.MO. Rosas, R.D.S.G. Campilho, R.D.F Moreira	10: Numerical analysis of geometrical modification combinations of the tensile strength of tubular adhesive joints	https://youtu.be/phjl6pPE4Dw
11:50 – 12:00	R.F.P. Resende, B.F.P. Resende, I.J. Sanchez-Arce, L.D.C. Ramalho, E.D.S.G. Campilho, J. Belinha	11: Meshless approach to material plasticity in adhesive joints	https://youtu.be/M0aYtDc2OVY
12:00 – 12:10	A.F.M. Silva, L.M.C. Peres, R. D.S.G. Campilho, R.J.B. Rocha	12: Impact loading analysis of tubular adhesive joints	https://youtu.be/vekYIwiGhRI
12:10 – 12:20	Isidro Sanchez-Arce, Diogo C. Goncalves, Luis D. C. Ramalho, Raul D.S.G: Campilho, Jorge A.O.P. Belinha	13: Meshless and hyper-elastic implementation to analyse flexible adhesives	https://youtu.be/rrWD8xSEQjc
12:20 – 12:30	Rizk Dwi Ardika, Teguh Triyono, Nurul Muhayat Triyono	24: A review porosity in aluminum welding	https://youtu.be/qWf_ICBDfz4

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14:00 - 16:00: Session 15 (Virtual). Chairperson: Carmine Maletta. **DISCUSSION**



IGF26

14:00 – 14:10	A.L. Ramalho, F.V. Antunes, J.A.M. Ferreira	30: Simulation of crack growth in T-welded joints - residual stress field effect	https://youtu.be/vGPnNDQMiko
14:10 – 14:20	P. Ferro, R. Meneghello, F. Berto	44: Setup of a numerical model for the Post Welding Heat Treatment simulation of steel joints	https://youtu.be/OUAyt_paANA
14:20 – 14:30	Ashley Amanda Freeman, Di Wan, Chiara Bertolin	53: Examining the effect of indentation separation on the properties of proteinaceous adhesive films	https://youtu.be/ewnkvD3PmXs
14:30 – 14:40	Song Wei, Xuesong Liu, Ping Wang, Yong Liu, Filippo Berto	66: Strength mismatch effect on residual stress of 10CrNi3MoV steel multipass butt-welded joints	https://youtu.be/0mnYAkDXglQ
14:40 – 14:50	Song Wei, Ping Wang, Xuesong Liu, Di Wan, Filippo Berto	67: Fatigue crack growth rates of 10CrNi3MoV steel welded joints considering the stress ratio	https://youtu.be/GuHAmQ4pAUy
14:50 – 15:00	Radzeya Zaidi, Drazan Kozak, Aleksandar Sedmak, Snezana Kirin, Marina Franulovic	86: Risk assessment based on analytical evaluation of structural integrity of drilling rig welded pipe	https://youtu.be/wsnXygc5m_8
15:00 – 15:10	Mihajlo Arandelovic, Simon Sedmak, Radomir Jovicic, Drazan Kozak, Branislav Dordevic	88: Numerical simulation of crack growth in a welded joint with defects	https://youtu.be/dGovn5jlO0Q
15:10 – 15:20	A. Visentin, A. Campagnolo, V. Babini, G. Meneghetti	90: Automated Implementation of the Peak Stress Method for fatigue assessment of complex welded structures	https://youtu.be/uY-WZuFb2P8
15:20 – 15:30	L. Vecchiato, B. Besa, A. Campagnolo, G. Meneghetti	98: Fatigue lifetime estimation of welded steel joints under variable amplitude loadings using the Peak Stress Method	https://youtu.be/UIRA4BfAkcM
15:30 – 15:40	Sergey Smirnov, Dmitry Konovalov, Irina, Veretennikova, Aleksander Pestov	101: Adhesive strength of an epoxy-based adhesive joint under a complex stress state	https://youtu.be/rm1iYi0KFJA
15:40 – 15:50	P. Russo Spena, G. Bruno, M. De Maddis, F. Lombardi, L. Panza, E. Traini	111: Influence of electrode wear on fracture of spot welds during shear tension test	https://youtu.be/Hu8oNZdhHYg
15:50 – 16:00	F. Leoni, P. Ferro, F. Berto	129: Preliminary Finite Element assessment of residual stresses in dissimilar AA6082-S355 butt welded joints produced with the Hybrid Metal Extrusion and Bonding technique	https://youtu.be/Mt0g6UaacE

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16:30 – 17:10: Session 16 (Virtual). Chairperson: Paolo Ferro. **DISCUSSION**



16:30 – 16:40	Jesus Toribio	180: Broadening the Amplitude of the definition of structural Integrity: a tribute to Galileo Galilei	https://youtu.be/pX_snBuL8ko
16:40 – 16:50	Naoya Oie, Tomoya Kawabata, Shoichi Kishiki, Tadao Nakagomi	94: Specimen size effect on brittle fracture properties of steel for building subjected to huge earthquake	https://youtu.be/mmD-wFyUlgk
16:50 – 17:00	Girolamo Costanza, Fuad Khoshnaw, Maria Elisa Tata, Kush Mehta	175: An overview of laser welding of metal foams: techniques, advantages and challenges	https://youtu.be/pYIXBEkbAwc
17:00 – 17:10	Dario Santonocito, Filippo Cucinotta, Eugenio Guglielmino, Gicomo Risitano	142: Fatigue damage assessment of welded HDPE details evaluating their energy release	https://youtu.be/A8Wsig6Uyj0
17:10 – 17:20	Ambra Celotto, Øystein Grong, Randi Holmestad, Jørgen A. Sørhaug, Jan Torgersen, Per Erik Vullum, Filippo Berto	150: Preliminary in situ study of FIB-assisted method for aluminium solid-state welding at the microscale	https://youtu.be/2t_r-BaWwUM
17:20 – 17:30	C.L. Ferreira, R.D.S.G. Campilho, R.D.F. Moreira, I.J. Sanchez-Arce	165: Applying the dual adhesive technique for strength improvement of bonded joints	https://youtu.be/0XXtv3q_O10
17:30 – 17:40	Ilham Widiyanto, Sutimin Sutimin, Fajar Budi Laksono, Aditya Rio Prabowo	40: Structural Assessment of Monocoque Frame Construction using Finite Element Analysis: A Study Case on a Designed Vehicle Chassis referring to Ford GT40	https://youtu.be/bTgc4nznXF8
17:40 – 17:50	Ermioni D. Pasiou, Andronikos Loukidis, Dimos Triantis, Stavros K. Kourkoulis	97: Enlightening critical details of a standardized procedure used to determine the fracture toughness of brittle structural materials	https://youtu.be/pi_xIavOdT4
17:50 – 18:00	Muhammad Sabiqulhair Akbar, Aditya Rio Prabowo, Fajar Budi Laksono, Seung Jung Baek	47: Assessment of Designed Midship Section Structures subjected to the Hydrostatic and Hydrodynamic Loads: a convergence Study	https://youtu.be/1GFMe-ffI_0