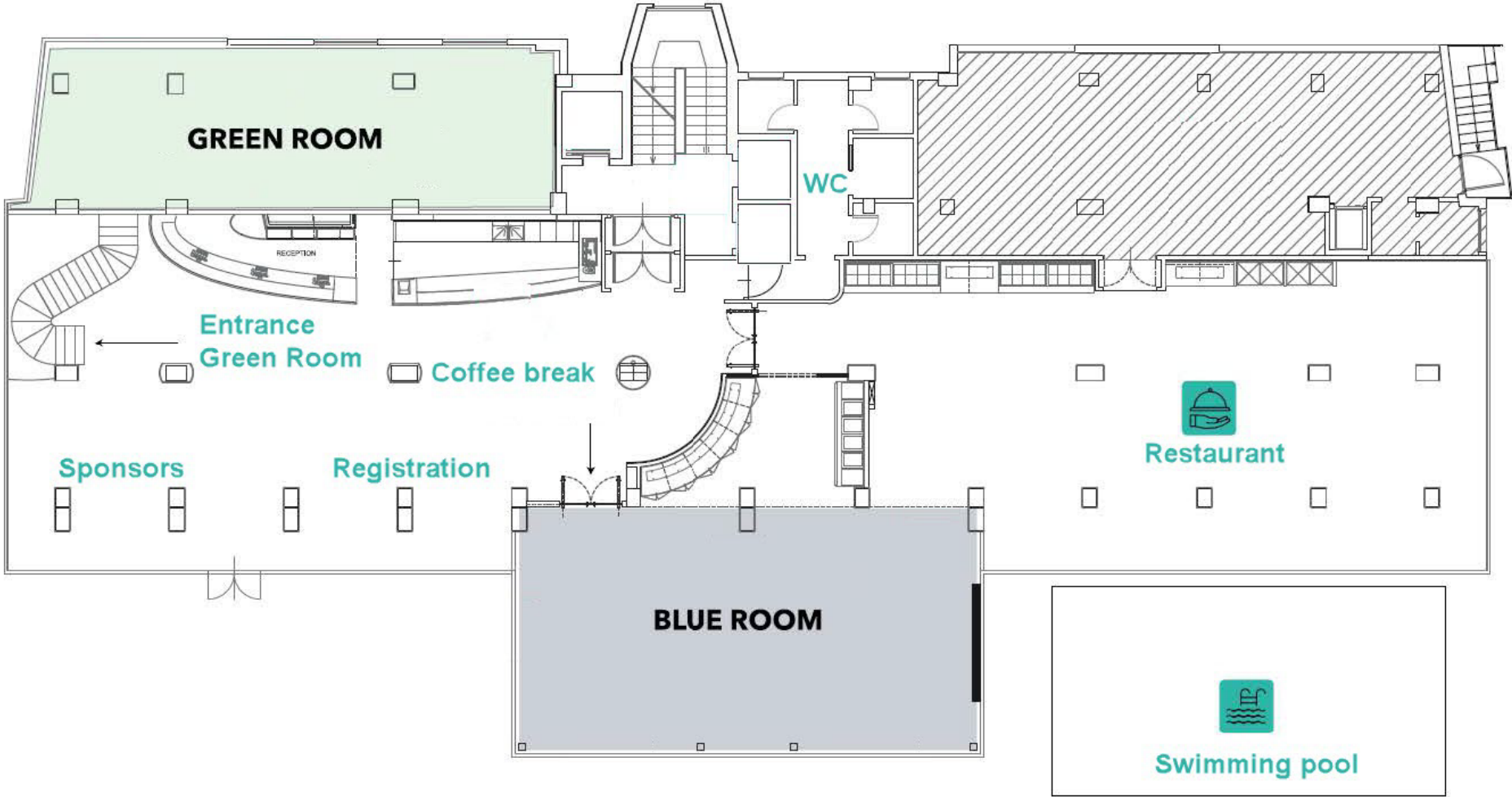


PROGRAMME (Time: CEST)



| 10.09.2024 | 11.09.2024 | 12.09.2024 |
|--|---|--|
| 08:00 - 09:00: <i>Registration</i> | 08:00 - 09:00: <i>Registration</i> | 08:00 - 09:00: <i>Registration</i> |
| 09:00 - 09:15: <i>Welcome – BLUE ROOM</i> | | |
| 09:15 - 9:45: Plenary Lecture 1 – BLUE ROOM | 09:15 - 9:45: Plenary Lecture 2 – BLUE ROOM 09:45 - 10:15: Plenary Lecture 3 – BLUE ROOM | 09:00 - 9:30: Plenary Lecture 4 – BLUE ROOM |
| 10:00 - 11:20: Session A.1 – BLUE ROOM | 10:30 - 11:30: Session A.5 – BLUE ROOM | 09:40 - 11:40: Session A.9 – BLUE ROOM |
| 10:00 - 11:20: Session B.1 – GREEN ROOM | 10:30 - 11:30: Session B.5 – GREEN ROOM | 09:40 - 11:40: Session B.9 – GREEN ROOM |
| 11:20 - 11:50: <i>Coffee Break</i> | 11:30 - 12:00: <i>Coffee Break</i> | 11:40 - 12:10: <i>Coffee Break</i> |
| 11:50 - 13:10: Session A.2 – BLUE ROOM | 12:00 - 13:00: Session A.6 – BLUE ROOM | 12:10 - 13:10: Session A.10 – BLUE ROOM |
| 11:50 - 13:10: Session B.2 – GREEN ROOM | 12:00 - 13:00: Session B.6 – GREEN ROOM | 12:10 - 13:10: Session B.10 – GREEN ROOM |
| 13:10 - 14:30: <i>Lunch</i> | 13:00 - 14:30: <i>Lunch</i> | 13:10 - 14:30: <i>Lunch</i> |
| 14:30 - 15:50: Session A.3 – BLUE ROOM | 14:30 - 15:50: Session A.7 – BLUE ROOM | 14:30 - 16:30: Session A.11 – BLUE ROOM |
| 14:30 - 15:50: Session B.3 – GREEN ROOM | 14:30 - 15:50: Session B.7 – GREEN ROOM | 14:30 - 16:30: Session B.11 – GREEN ROOM |
| 15:50 - 16:20: <i>Coffee Break</i> | 15:50 - 16:20: <i>Coffee Break</i> | 16:30 - 16:40: <i>Closing Ceremony – BLUE ROOM</i> |
| 16:20 - 17:40: Session A.4 – BLUE ROOM | 16:20 - 18:40: Session A.8 – BLUE ROOM | 16:40 - 17:10: <i>Coffee Break</i> |
| 16:20 - 17:40: Session B.4 – GREEN ROOM | 16:20 - 18:40: Session B.8 – GREEN ROOM | |
| 17:50 – 18:50: <i>Assemblea dei Soci IGF – BLUE ROOM</i> | 19:30 - 23:00: <i>Social dinner – SWIMMING POOL & RESTAURANT AQUA HOTEL</i> | 17:30 - 19:00: <i>Social event</i> |

AQUA HOTEL



PLENARY LECTURES - *BLUE ROOM*

(Time: CEST)



| | | | |
|------------|---------------|---|--|
| 10.09.2024 | 09:15 - 9:45 | Plenary Lecture 1: Crack formation and pathways in Nitinol biomedical devices | by Alan R. Pelton Chair: Nicholas Fantuzzi |
| 11.09.2024 | 09:15 - 9:45 | Plenary Lecture 2: Modeling of cohesive interface: contact, interlocking, and dilatancy | by Elio Sacco Chair: Francesco Iacoviello |
| | 9:45 - 10:15 | Plenary Lecture 3: Impact of microstructural heterogeneity on crack path trajectories under fretting fatigue loading | by Reza Talemi Chair: José Alexander Araújo |
| 12.09.2024 | 09:00 - 09:30 | Plenary Lecture 4: Structural integrity in marine environment for the decarbonisation of the offshore sector | by Nicholas Fantuzzi Chair: Sabrina Vantadori |

10.09.2024

10:00 - 11:20 - Session A.1. Chairs: Fabrizio Greco, Paolo Lonetti, Lorenzo Leonetti, Arturo Pascuzzo

Thematic Symposium 4: *Advanced models for crack path prediction in traditional and innovative materials*



BLUE ROOM

| | | |
|---------------|--|---|
| 10:00 – 10:20 | <u>Umberto De Maio</u> , F. Greco, P. Lonetti, A. Pranno, G. Sgambitterra | 107: A multilevel fluid/structure model for predicting the damage behavior induced by flash floods in masonry structures |
| In presence | | |
| 10:20 – 10:40 | <u>Guido Dhondt</u> , W. Nöhrung | 10: Prediction of the crack propagation direction in missions with time-varying multi-axial loading |
| In presence | | |
| 10:40 – 11:00 | <u>Simone Lucertini</u> , G. Morettini, F. Cianetti | 72: Development of a numerical prediction method for the strain energy density of welded joints using structural stresses derived from nodal forces |
| In presence | | |
| 11:00 – 11:20 | U. De Maio, F. Greco, F. Fabbrocino, R. Luciano, P. Nevone Blasi, <u>Andrea Pranno</u> | 111: Structural stability investigation in bioinspired metamaterials based on glass sponge microstructures |
| In presence | | |

10.09.2024

10:00 - 11:20 - Session B.1. Chair: Alan R. Pelton

General Session

GREEN ROOM



| | | |
|---------------|--|--|
| 10:00 – 10:20 | <u>Roger Nilen</u> , R. Balmer, T. Nicolaides, M. Walsh, S. Maifadi, S. Nyembe, T. Shabalala, M. Rothe | 4: Typical crack behaviour in polycrystalline diamond cutters for rock cutting |
| In presence | | |
| 10:20 – 10:40 | A. Hebda, M. Kurek, S. Malys, J. Malecka, K. Żak, <u>Tadeusz Łagoda</u> , B. Strnadel | 14: Topography of cracks in aluminium alloys after impact bending |
| In presence | | |
| 10:40 – 11:00 | <u>Bo van Schuppen</u> , R. Philips, D. Leonetti, B. Snijder | 50: Evaluation of the net cross-sectional failure of steel plates with different hole configurations in the presence of cracks |
| In presence | | |
| 11:00 – 11:20 | <u>Marta Kurek</u> , B. Strnadel, A. Kurek, T. Łagoda | 16: Taking into account the bending and torsion fatigue strength of various aluminium alloys when designing light and durable structures |
| In presence | | |

10.09.2024

11:50 - 13:10 - Session A.2. Chairs: Fabrizio Greco, Paolo Lonetti, Lorenzo Leonetti, Arturo Pascuzzo

Thematic Symposium 4: *Advanced models for crack path prediction in traditional and innovative materials*



BLUE ROOM

| | | |
|---------------|---|--|
| 11:50 – 12:10 | <u>Meral Tuna</u> , N. Fantuzzi, P. Trovalusci | 102: On crack paths in micropolar continuum |
| In presence | | |
| 12:10 – 12:30 | D. Ammendolea, F. Greco, <u>Lorenzo Leonetti</u> , P. Lonetti, A. Pascuzzo | 103: Prediction of multiscale crack propagation in anisotropic microstructures by using an efficient cohesive/bulk homogenization scheme |
| In presence | | |
| 12:30 – 12:50 | <u>Arturo Pascuzzo</u> , F. Fabbrocino, D. Ammendolea, F. Greco, L. Leonetti, G. Sgambitterra | 104: An effective multiscale modeling approach for the failure analysis of masonry structures |
| In presence | | |
| 12:50 – 13:10 | <u>Domenico Ammendolea</u> , F. Greco, L. Leonetti, P. Lonetti, A. Pascuzzo | 106: An adaptive phase-field approach for simulating crack propagation in heterogeneous structures Candidate for TC3 Young Scientist Award |
| In presence | | |

10.09.2024

11:50 - 13:10 - Session B.2. Chairs: Davide Leonetti, Giovanni Pio Pucillo

General Session

GREEN ROOM



| | | |
|---------------|---|--|
| 11:50 – 12:10 | B. Nečemer, P. Lampret, <u>Srečko Glodež</u> | 17: Fatigue analysis of different chiral auxetic cellular structures |
| In presence | | |
| 12:10 – 12:30 | <u>Sebastian Skrobacz</u> , T. Łagoda, P. Krysiński, S. Malys | 61: Automation in welding process of aluminium alloys intended for production of door frames |
| In presence | | |
| 12:30 – 12:50 | A. Karolczuk, <u>Andrzej Kurek</u> | 20: Mean stress effect under in-phase and out-of-phase multiaxial loading on fatigue life of additively manufactured 18Ni300 maraging steel |
| In presence | | |
| 12:50 – 13:10 | <u>Karolina Glowacka</u> , T. Smolnicki | 27: Application of digital image correlation to identify crack locations during bending of composite samples of various dimensions Candidate for TC3 Young Scientist Award |
| In presence | | |

10.09.2024

14:30 – 15:50 - Session A.3. Chairs: Fabrizio Greco, Paolo Lonetti, Lorenzo Leonetti, Arturo Pascuzzo

Thematic Symposium 4: *Advanced models for crack path prediction in traditional and innovative materials*



BLUE ROOM

| | | |
|---------------|---|---|
| 14:30 – 14:50 | <u>Umberto De Maio</u> , D. Gaetano, F. Greco, P. Lonetti, P. Nevone Blasi, A. Pranno | 108: Fracture analysis in quasi-brittle materials via an adaptive cohesive interface model |
| In presence | | |
| 14:50 – 15:10 | E. Castillo, <u>Diego Díaz-Salamanca</u> , S. Blasón, M. Muñoz-Calvente, A. Fernández-Canteli | 115: Methodological advances in crack growth under fatigue loading based on a unitary phenomenological approach |
| In presence | | |
| 15:10 – 15:30 | A. Grbović, <u>Aleksandar Sedmak</u> , G. Kastratović, N. Vidanović | 59: SMART simulation of fatigue crack path in components with complex geometry – two case studies |
| Remote | | |
| 15:30 – 15:50 | <u>Daniele Gaetano</u> , F. Greco, L. Leonetti, R. Luciano, A. Pranno | 110: Failure of nonlinear microstructured solids by cohesive and contact instabilities |
| Remote | | |

10.09.2024

14:30 – 15:50 - Session B.3. Chair: Vladimir Chmelko

General Session

GREEN ROOM



| | | |
|---------------|---|--|
| 14:30 – 14:50 | <u>David Taylor</u> , E. Barton, I. Duffy, R. Teeling, R. Enea Casse, G. Marty, R. Santoprete | 23: Splitting in human hair: a crack propagation problem |
| In presence | | |
| 14:50 – 15:10 | <u>Manish Kumar</u> , P. Ferro, F. Berto, E. Salvati | 41: Experimental and numerical analyses of the quasi-static behaviour of a bio-inspired welding patterns |
| In presence | | |
| 15:10 – 15:30 | <u>Joanna Malecka</u> , W. Kwaśny, M. Pawlyta, T. Łagoda | 105: Comparison fatigue cracking of 6060 aluminum alloy and RG7 bronze specimens under cyclic bending with torsion |
| In presence | | |
| 15:30 – 15:50 | <u>Shiv Sagar</u> , S. Roy Chowdhury | 93: An elasto-plastic phase-field fracture model for micromechanical analysis of fiber reinforced composites |
| Remote | | |

10.09.2024

16:20 – 17:40 - Session A.4. Chairs: Fabrizio Greco, Paolo Lonetti, Lorenzo Leonetti, Arturo Pascuzzo

Thematic Symposium 4: *Advanced models for crack path prediction in traditional and innovative materials*



BLUE ROOM

| | | |
|---------------|---|--|
| 16:20 – 16:40 | <u>Sobhan Pattajoshi</u> , S. Ray | 73: Prediction of the dynamic crack path of concrete under projectile impact loading Candidate for TC3 Young Scientist Award |
| Remote | | |
| 16:40 – 17:00 | M. Gupta, <u>Sonali Bhowmik</u> | 86: Molecular dynamics simulation of edge crack propagation in CSH gel under direct and cyclic bending |
| Remote | | |
| 17:00 – 17:20 | J. Duarte Oliveira, A. Martins de Lima, <u>Luis Eduardo Kostascki</u> , E. Marangon, F. Bianchi Pereira da Costa, S. Vantadori | 109: Experimental and numerical strengths of a pervious concrete |
| Remote | | |
| 17:20 – 17:40 | <u>Wei Song</u> , X. Shi, S. Wei, F. Berto | 124: Fatigue behaviors of thick fillet joints made by structural steel under different post-welding treatments |
| Remote | | |

17:50 – 18:50 *Assemblea dei Soci IGF*

10.09.2024

16:20 – 17:40 - Session B.4. Chairs: José Alexander Araújo, Jesús Vázquez Valeo

Thematic Symposium 3: *Crack path under fretting wear/fatigue*

GREEN ROOM



| | | |
|---------------|--|--|
| 16:20 – 16:40 | <u>Jesús Vázquez Valeo</u> | 122: Seville Fretting Group, more than 25 years of research |
| In presence | | Keynote lecture |
| 16:40 – 17:00 | <u>María Moreno-Rubio</u> , J. Vázquez, C. Navarro, J. Domínguez | 60: Crack growth behavior of Inconel 718 under fretting fatigue at room and high temperature |
| In presence | | |
| 17:00 – 17:20 | R. Araujo Cardoso, A.L. Rodrigues Araújo, <u>José Alexander Araújo</u> | 66: ANN vs. theoretical models for predicting crack path in fretting fatigue |
| In presence | | |
| 17:20 – 17:40 | <u>Ramdane Boukellif</u> , S. Hilleke, J. Litzba, W. Riesen | 18: Crack path prediction on integrated raceways under rolling contact fatigue |
| In presence | | |

11.09.2024

10:30 - 11:30 - Session A.5. Chairs: Raffaele Sepe, Venanzio Giannella, America Califano

Thematic Symposium 5: *Crack path in advanced materials: experimental and modelling techniques*

BLUE ROOM



| | | |
|---------------|--|---|
| 10:30 – 10:50 | C.F. Popa, S. Galatanu, <u>Liviu Marsavina</u> | 22: Influence of printing orientation on the crack path in 3D printed tensile and shear specimens |
| In presence | | |
| 10:50 – 11:10 | <u>Sota Oshima</u> | 34: Effects of types of matrix resins and local fiber volume fraction on crack path in carbon fiber composite laminates |
| In presence | | |
| 11:10 – 11:30 | <u>Hiroshi Nishiguchi</u> , H. Sueyoshi, D. Sasaki | 44: Al-based coatings for preventing hydrogen ingress in high-pressure systems |
| In presence | | |

11.09.2024

10:30 - 11:30 - Session B.5. Chair: Elio Sacco

General Session

GREEN ROOM



| | | |
|---------------|--|---|
| 10:30 – 10:50 | M. Kepka jr., J. Kepka, <u>Miloslav Kepka</u> | 45: Improving Repair Welds with HFMI |
| In presence | | |
| 10:50 – 11:10 | <u>Lucie Malikova</u> , P. Miarka | 46: Investigations on crack propagation from steel anchors |
| In presence | | |
| 11:10 – 11:30 | <u>Camilla Ronchei</u> , A. Carpinteri, R. Fiorillo, D. Scorza, B.N. Rojo Tanzi, A. Zanichelli, S. Vantadori | 48: Experimental investigation of the mechanical and fracture behaviour of a pervious concrete for civil applications |
| In presence | | |

11.09.2024

12:00 - 13:00 - Session A.6. Chairs: Raffaele Sepe, Venanzio Giannella, America Califano

Thematic Symposium 5: *Crack path in advanced materials: experimental and modelling techniques*

BLUE ROOM



| | | |
|---------------|--|---|
| 12:00 – 12:20 | <u>Lukasz Sadowski</u> | 49: Effect of the oil refinery waste catalyst on the formation of decalcification-induced microcracks in cement paste samples exposed to strong acids |
| In presence | | |
| 12:20 – 12:40 | V. Giannella, <u>Alberto Campagnolo</u> , R. Citarella, G. Meneghetti | 29: Crack propagation simulations in steel welded joints for off-road vehicles |
| In presence | | |
| 12:40 – 13:00 | <u>Costanzo Bellini</u> , V. Di Cocco, F. Iacoviello, L.P. Mocanu, L. Sorrentino, R. Borrelli, S. Franchitti | 79: Tracking crack propagation in polymeric composite skinned sandwich specimens via high-resolution camera |
| In presence | | |

11.09.2024

12:00 - 13:00 - Session B.6. Chair: Eric Breitbarth

Thematic Symposium 8: *Crack tip detection and advanced crack tip field characterization in digital image correlation data*

GREEN ROOM



| | | |
|---------------|---|--|
| 12:00 – 12:20 | <u>Jorge Guillermo Díaz-Rodríguez</u> | 2: Least squares method for mode III SIF calculation |
| In presence | | |
| 12:20 – 12:40 | <u>Eric Breitbarth</u> , E. Dietrich, F. Dömling, D. Melching, F. Paysan, V. Schöne, T. Strohmann | 39: A universal software and hardware framework for tracking and evaluating fatigue cracks under multiaxial loading conditions |
| In presence | | |
| 12:40 – 13:00 | <u>Yamato Abiru</u> , H. Nishiguchi, T. Itaya | 47: Nondestructive detection of internal pipe cracks in hydrogen-energy systems |
| In presence | | |

11.09.2024

14:30 – 15:50 - Session A.7. Chairs: José Alexander Araújo, Jesús Vázquez Valeo

Thematic Symposium 3: *Crack path under fretting wear/fatigue*

BLUE ROOM



| | | |
|---------------|---|---|
| 14:30 – 14:50 | <u>Diego Erena</u> , M. Moreno, J. Vázquez Valeo, C. Navarro, S. Vantadori, A. Zanichelli | 78: Fatigue assessment in shaft-hub assemblies with AL7075-T651 and scalmalloy |
| In presence | | |
| 14:50 – 15:10 | <u>Andrea Zanichelli</u> , A. Carpinteri, C. Ronchei, D. Scorza, S. Vantadori | 101: Influence of fretting fatigue parameters on fatigue life and crack orientation |
| In presence | | |
| 15:10 – 15:30 | <u>Anass Gouya</u> , M. Hinna, H. Chaffoui, E. Atmani, M. Meziane | 13: Mechanical characterization of PVC-coated copper cables: investigating strain and friction resistance through experimental analysis |
| Remote | | |
| 15:30 – 15:50 | <u>Grzegorz Glodek</u> , S. Gothivarekar, B. Van Hooreweder, R. Talemi | 26: Tribo-mechanical fracture analysis of additively manufactured Ti-6Al-4V under cyclic loading |
| Remote | | |

11.09.2024

14:30 – 15:50 - Session B.7. Chair: Eric Breitbarth

Thematic Symposium 8: *Crack tip detection and advanced crack tip field characterization in digital image correlation data*

GREEN ROOM



| | | |
|---------------|--|---|
| 14:30 – 14:50 | <u>Carl H. Wolf</u> , S. Henkel, C. Düreth, M. Gude, H. Biermann | 77: Characterization of the fatigue crack growth behavior of fabric-reinforced fiber-plastic composites under interlaminar shear and out-of-plane compressive loading |
| In presence | | |
| 14:50 – 15:10 | <u>Hendrik Baarsen</u> , D. Leonetti, G.P. Pucillo, H.H. Snijder | 97: Measurement of fatigue crack growth using full-field displacement obtained from DIC |
| In presence | | |
| 15:10 – 15:30 | <u>David Melching</u> , T. Strohmman, F. Paysan, E. Breitbarth | 54: Discovering crack tip correction formulas with physical deep symbolic regression |
| In presence | | |
| 15:30– 15:50 | <u>Pasquale Gallo</u> , P. Lehto, H. Remes | 38: Shear strain localizations and microstructural influences on small fatigue crack growth: a study using high-resolution DIC and novel EBSD |
| Remote | | |

11.09.2024

16:20 – 18:40 - Session A.8. Chair: Reza Talemi

General Session

BLUE ROOM



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|---------------|---|--|
| 16:20 – 16:40 | <u>Antonio Ramón Quiñonero-Moya</u> , D. Infante-García, A. Vercher, E. Giner | 99: Simulation of cortical bone microcracking in three-point bending test using phase field fracture model |
| In presence | | |
| 16:40 – 17:00 | <u>Bastien Lammens</u> , Gérald Portemont, Julien Berthe, Rian Seghir, Julien Réthoré | 7: Influence of the non-singular terms and the crack velocity on KIC of an epoxy resin |
| In presence | | |
| 17:00 – 17:20 | <u>Paolo Ferro</u> , M. Dabalà, R. Meneghello, G. Savio, F. Berto, E. Salvati | 53: Microstructure, distortion and residual stress investigation of bio-inspired welding patterns |
| In presence | | |
| 17:20 – 17:40 | <u>Luca Vecchiato</u> , A. Campagnolo, J. Bär, G. Meneghetti | 55: Estimating fatigue crack location, size and shape in axially loaded Ti6Al4V wrought round bars using the multi-probe potential drop method |
| In presence | | |
| 17:40 – 18:00 | <u>Yuty G. Matvienko</u> , A.M. Pokrovskii | 19: The effect of two-dimensional crack-tip constraint on crack paths |
| In presence | | |
| 18:00 – 18:20 | <u>Slobodanka Boljanović</u> , A. Carpinteri | 123: Failure resistance analysis of fatigue-critical surface flaws |
| In presence | | |
| 18:20 – 18:40 | <u>Anna Mariya Shajan</u> , R. Piska, S. Natarajan | 35: Dynamic fracture analysis of functionally graded materials through adaptive phase field simulation |
| In remote | | |

19:30 – 00:00 *Social Dinner*

11.09.2024

16:20 – 18:40 - Session B.8. Chairs: Vittorio Di Cocco, Andrea Zanichelli

General Session

GREEN ROOM



| | | |
|---------------|---|---|
| 16:20 – 16:40 | A. Shit, <u>Raghu V Prakash</u> | 62: Study of effective stress intensity factor in 3-2-1 lozenge pattern riveted joints under biaxial loading using maximum energy release rate (MERR) based crack advancement |
| In presence | | |
| 16:40 – 17:00 | <u>Sadiq Gbagba</u> , F. Concli | 70: Numerical investigation of multiaxial fatigue in laser welded 347l pressure vessels |
| In presence | | |
| 17:00 – 17:20 | <u>Martina Totaro</u> , G. Risitano, G. Di Bella, D. Crisafulli, M. Chairi, D. D'Andrea | 84: Numerical and experimental characterization of new basalt and glass fiber reinforced composites mechanical properties |
| In presence | | |
| 17:20 – 17:40 | <u>Pietro Foti</u> , M. Carraturo, S. Marconi, G. Alaimo, A. Reali, F. Auricchio, F. Berto | 91: Fatigue assessment of lattice structures through SED method |
| In presence | | |
| 17:40 – 18:00 | <u>Daniela Scorza</u> , A. Carpinteri, C. Ronchei, A. Zanichelli, S. Vantadori, R. Luciano | 74: Mechanical behaviour of multiple cracked nanobeams: a novel analytical model |
| In presence | | |
| 18:00 – 18:20 | <u>Miu Hayashi</u> , T. Ando, Y. Ogawa, H. Akebono, A. Sugeta | 24: Fatigue design recommendations for anodized aluminum alloys A6061 Candidate for TC3 Young Scientist Award |
| In presence | | |
| 18:20 – 18:40 | <u>Jinta Arakawa</u> , K. Hirazumi, T. Uemori, Y. Takemoto | 43: Elucidation of small fatigue crack initiation and propagation behavior on polycrystal Ti-22V-4Al Candidate for TC3 Young Scientist Award |
| In presence | | |

19:30 – 00:00 *Social Dinner*

12.09.2024

09:40 - 11:40 - Session A.9. Chairs: Raffaele Sepe, Venanzio Giannella, America Califano

Thematic Symposium 5: *Crack path in advanced materials: experimental and modelling techniques*

BLUE ROOM



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|---------------|--|---|
| 09:40 – 10:00 | <u>Sneha Sneha</u> , S. Ray | 80: Fracture process zone evaluation of ultra-high performance hybrid fiber reinforced concrete with varying fibre percentage |
| In presence | | |
| 10:00 – 10:20 | D. D'Andrea, D. Crisafulli, G. Risitano, <u>Dario Santonocito</u> | 89: Thermography based approach for the rapid assessment of damage in PA12 obtained by Multijet-Fusion printing technology |
| In presence | | |
| 10:20 – 10:40 | <u>Michele Perrella</u> , E. Armentani, G. Lamanna, V.P. Berardi | 64: Comparison among methods for identification of CZM parameters from ENF test |
| Remote | | |
| 10:40 – 11:00 | <u>Bineet Kumar</u> , A. Sharama, S. Ray | 76: Characterization of the fracture behavior of UHPFRC by considering the influence of specimen size and fiber content Candidate for TC3 Young Scientist Award |
| Remote | | |
| 11:00 – 11:20 | <u>Gabriele Cricri</u> , N. Valoroso | 85: Comparison between a direct and a regularized method for brittle crack path modelling |
| Remote | | |
| 11:20 – 11:40 | <u>Ram Lal Riyar</u> , S. Bhowmik | 96: Effect of corrosion and reinforcement percentage on the fracture properties of reinforced concrete |
| Remote | | |

12.09.2024

09:40 - 11:40 - Session B.9. Chair: Nicholas Fantuzzi

General Session

GREEN ROOM



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|---------------|---|---|
| 09:40 – 10:00 | R. Fernandes, J.S. Jesus, <u>Luis Filipe Borrego</u> , J.A.M. Ferreira, R. Branco, J.D.M. Costa | 11: Transient fatigue crack path on AlSi10Mg alloy CT specimens produced by laser powder bed fusion |
| In presence | | |
| 10:00 – 10:20 | <u>Nur Mohamed Dhansay</u> | 82: Investigating the fatigue fracture mechanisms of laser powder bed fusion Ti-6Al-4V |
| In presence | | |
| 10:20 – 10:40 | <u>Vladimir Chmelko</u> , M. Margetin, F. Likavčan, M. Kučerková, M. Kepka | 100: Analysis of the specific fatigue properties of additively manufactured metallic materials |
| In presence | | |
| 10:40 – 11:00 | <u>Hugo A.F.A. Santos</u> , V.V. Silberschmidt | 3: Assessment of multi-cracked non-uniform FGM beams using a force-based finite element formulation |
| Remote | | |
| 11:00 – 11:20 | <u>Zhihua Xiong</u> , J. Li, D. Di | 88: Hysteresis performance of novel beam-column joints using composite dowels |
| Remote | | |
| 11:20 – 11:40 | <u>Aditya Khanna</u> , A. Kotousov | 83: Crack growth rates and crack closure in additively manufactured stainless steels |
| Remote | | |

12.09.2024

12:10 – 13:10 - Session A.10. Chairs: Alberto Campagnolo, Pietro Foti

General Session

BLUE ROOM



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|---------------|---|---|
| 12:10 – 12:30 | <u>Stavros K. Kourkoulis</u> , E.D. Pasiou, D. Triantis, I. Stavrakas | 56: Comparative assessment of the acoustic activity and the Pressure Stimulated Voltage in marble specimens under compression |
| Remote | | |
| 12:30 – 12:50 | <u>Mohammad Jameel Zeidan</u> , A.F. Hassan, N.A. Saad, A.M. Al-Mukhtar | 9: A comprehensive review of forming methods for composite materials and cracking behavior |
| Remote | | |
| 12:50 – 13:10 | <u>Amani J. Majeed</u> , D.T. Yaseen, M.A. Hassan, A.M. Al-Mukhtar | 25: Enhancing realism in hydraulic fracturing simulation models: the evolution of KGD and PKN models |
| Remote | | |

12.09.2024

12:10 – 13:10 - Session B.10. Chairs: Miloslav Kepka, Camilla Ronchei

General Session

GREEN ROOM



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| 12:10 – 12:30 | <u>Andrey Shanyavskiy</u> , A. Soldatenkov | 8: Crack path for fatigued Ni-based (EI698) and Ti-based (VT22) alloys on the macro- and mesoscale levels Keynote Lecture |
| Remote | | |
| 12:30 – 12:50 | M. Dima, I. Valais, D. Linardatos, N. Kalyvas, G. Fountos, A. Bakas, K. Ninos, I. Kandarakis, <u>Christos Michail</u> | 36: Influence of temperature on the luminescence output of two GAGG: Ce Single Crystals Scintillators |
| Remote | | |
| 12:50 – 13:10 | <u>Vivek Vishwakarma</u> , S. Ray | 90: Prediction of crack path in reinforced concrete using acoustic emission analysis |
| Remote | | |

12.09.2024

14:30 – 16:30 - Session A.11. Chairs: Raffaele Sepe, Venanzio Giannella, America Califano

Thematic Symposium 5: *Crack path in advanced materials: experimental and modelling techniques*

BLUE ROOM



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| 14:30 – 14:50 | <u>Johannes L. Otto</u> , C. Marroni, L.M. Sauer, In presence H. Kanagarajah, F. Walther | 51: Microstructure-dependent fatigue and corrosion fatigue mechanisms of diffusion brazed metastable austenite joints with nickel-based filler metals Candidate for TC3 Young Scientist Award |
| 14:50 – 15:10 | <u>America Califano</u> , A. Bacco, V. Giannella, In presence R. Sepe | 75: Evaluation of the fatigue strength of high-strength steel welded joints based on local approaches Candidate for TC3 Young Scientist Award |
| 15:10 – 15:30 | C. Bellini, D. Scorza, S. Vantadori, F. Presence Iacoviello, <u>Vittorio Di Cocco</u> | 126: Fatigue crack path of an Al-Zn alloy reinforced with dispersed zirconium dioxide nanoparticles |
| 15:30 – 15:50 | <u>Albena Doicheva</u> Remote | 116: Alteration of the shear force in an internal beam-column joint during the initiation and growth of a crack in a cantilever beam |
| 15:50 – 16:10 | G. Cricri, <u>Francesco Penta</u> Remote | 117: A simple method for designing adhesive single lap joints |
| 16:10 – 16:30 | <u>Sudhendu N. Tiwari</u> , P.K. Agnihotri Remote | 21: Estimation of crack resistance curves and crack paths in ceramic-polymer composites with nacre-like lamellar and brick-mortar structure |

16:30 – 16:40 *Closing Ceremony*

17:30 – 19:00 *Social event*

12.09.2024

14:30 – 16:30 - Session B.11. Chairs: Costanzo Bellini, Daniela Scorza

General Session

GREEN ROOM



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| 14:30 – 14:50 | Andrii Kompanets, <u>Davide Leonetti</u> , Remco Duits, Bert Snijder | 127: Visual Crack Detection in Steel Structures With Convolutional Neural Networks |
| Presence | | |
| 14:50 – 15:10 | I. Greenfeld, I. Kellersztein, <u>Hanoch Daniel</u> <u>Wagner</u> | 30: Hierarchical micro- and nano-interfaces as fracture propagation traps in natural layered composites |
| Presence | | |
| 15:10 – 15:30 | <u>Valery Shlyannikov</u> , D. Kosov, R. Khamidullin | 28: Crack path theory and applications in phase field fracture context |
| Remote | | |
| 15:30 – 15:50 | U. De Maio, F. Greco, P. Lonetti, A. Pranno, <u>Giulia Sansone</u> | 112: A model-based health monitoring technique to investigate the dynamic properties degradation in reinforced beams under progressive damage |
| Remote | | |
| 15:50 – 16:10 | <u>Bruno Schmidt</u> , D. Scorza, S. Vantadori, J. Vassoler | 118: A numerical-experimental characterization of damage parameters of a short fiber reinforced material model |
| Remote | | |
| 16:10 – 16:30 | <u>Christina Charalampidou</u> , A. Proiou, S. Kourkoulis, N. Alexopoulos | 125: The effect of ageing on the corrosion-induced decrease of plane stress fracture toughness of Al-Cu-Li 2198 alloy |
| Remote | | |

17:30 – 19:00 *Social event*