


**ESIS Video recordings**

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The background features a dark teal and blue color scheme. On the right side, there is a stylized, wireframe representation of a human face, composed of white lines forming a mesh. To the left of the face, there are several interlocking gears of various sizes, rendered in shades of blue and white. The overall aesthetic is technical and futuristic.

**1st Biennial ESIS-CSIC  
Conference on Structural  
Integrity - BECCSI 2025**



# 1st Biennial ESIS-CSIC Conference on Structural Integrity BECCSI 2025

Belgrade (Serbia), November 25-28, 2025.

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Yan Li, School of Aerospace Engineering and Applied Mechanics, Tongji University, China  
Zhi-Chao Fan, Hefei General Machinery Research Institute, Hefei, China

## VIDEO-PRESENTATIONS

Presentation title	Authors	DOI
Opening ceremony of BECCSI	Tung Tu, Aleksandar Sedmak	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.143">https://doi.org/10.53254/ESISTUBE.BECCSI2025.143</a>
Special event Jim Rice's 85th Birthday - About Jim (James Rice)	Ružica Nikolić	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.139">https://doi.org/10.53254/ESISTUBE.BECCSI2025.139</a>
Special event Jim Rice's 85th Birthday - Direct measurement of J integral	Aleksandar Sedmak	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.140">https://doi.org/10.53254/ESISTUBE.BECCSI2025.140</a>
Special event Jim Rice's 85th Birthday - Micromechanical modelling – Complete Gurson model	Zhiliang Zhang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.141">https://doi.org/10.53254/ESISTUBE.BECCSI2025.141</a>
Special event Jim Rice's 85th Birthday - Viscoplasticity and damage evolution for reliability engineering	Qian Zhengfang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.142">https://doi.org/10.53254/ESISTUBE.BECCSI2025.142</a>
Plenary lectures - Fracture mechanics based design of super-low ice adhesion surfaces	Jianying He	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.1">https://doi.org/10.53254/ESISTUBE.BECCSI2025.1</a>
Plenary lectures - Hydrogen embrittlement mechanisms in metals: new insights	Miloš Djukic	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.2">https://doi.org/10.53254/ESISTUBE.BECCSI2025.2</a>
Plenary lectures - Three-dimensional fatigue fracture mechanics: bridge the gap from laboratory to engineering structures	Wanlin Guo	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.3">https://doi.org/10.53254/ESISTUBE.BECCSI2025.3</a>
Plenary lectures - Analytical mechanical theory and high-throughput indentation instrument	Lixun Cai	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.4">https://doi.org/10.53254/ESISTUBE.BECCSI2025.4</a>
Plenary lectures - From metals to nanomaterials: a comprehensive approach to fracture toughness assessment	Sabrina Vantadori, Francesco Iacoviello	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.5">https://doi.org/10.53254/ESISTUBE.BECCSI2025.5</a>
Plenary lectures - Additive manufacturing, current trends and future opportunities	Filippo Berto	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.6">https://doi.org/10.53254/ESISTUBE.BECCSI2025.6</a>
Plenary lectures - Simulation of ductile rupture: from micromechanics to structural failure	Jacques Besson	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.7">https://doi.org/10.53254/ESISTUBE.BECCSI2025.7</a>

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Keynote - Theoretical foundations, benefits, and limitations of laser shock peening in Russia	Oleg Plekhov	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.8">https://doi.org/10.53254/ESISTUBE.BECCSI2025.8</a>
Consecutive shock wave and fatigue loads: fundamentals and LSP optimization strategy	Oleg Naimark, Sergey Uvarov, Yury Bayandin, Mikhail Bannikov, Vladimir Oborin, Aleksander Balachnin, Alexandra Yurina	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.9">https://doi.org/10.53254/ESISTUBE.BECCSI2025.9</a>
Effect of the laser shock peening area location on the fatigue properties of specimens with stress concentrator	Elena Gachegova, Aleksei Vshivkov, Anastasiia Iziumova, Oleg Plekhov	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.10">https://doi.org/10.53254/ESISTUBE.BECCSI2025.10</a>
Enhancing the structural integrity of heat-exchanger tubes against flow-induced vibration using surface texturing	MingJue Zhou, ShuaiDa Li, Jun Yun, YueBing Li	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.11">https://doi.org/10.53254/ESISTUBE.BECCSI2025.11</a>
Influence of laser shock peening on kinetic of fatigue crack propagation	Aleksei Vshivkov, Elena Gachegova, Maria Bartolomei, Anastasia Iziumova, Oleg Plekhov	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.12">https://doi.org/10.53254/ESISTUBE.BECCSI2025.12</a>
Numerical analysis of residual stresses formed in a thin plate after LSP	Mariia Bartolomei, Igor Kudryashev, Aleksey Vshivkov, Elena Gachegova, Anastasia Iziumova, Oleg Plekhov	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.13">https://doi.org/10.53254/ESISTUBE.BECCSI2025.13</a>
On the prediction of fatigue crack growth in aluminum alloy with compressive residual stresses using the weight function method	Nikolai Kashaev	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.14">https://doi.org/10.53254/ESISTUBE.BECCSI2025.14</a>
Optimized bilateral surface ultrasonic rolling technology assisting directed energy deposition of thin-walled medium-entropy alloy with high mechanical performance	Yufei Chen, Tiwen Lu, Xiyu Chen, Binhan Sun, Ning Yao, Kaishang Li, Jihang Qiu, Xiaoqi Hu, XianCheng Zhang, Shan-Tung Tu	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.15">https://doi.org/10.53254/ESISTUBE.BECCSI2025.15</a>
Visualization of tensile damage evolution of 3D braided carbon fiber composites using	Zhe Zhang, Mengdan Li, Hong Gao, Xu Chen	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.16">https://doi.org/10.53254/ESISTUBE.BECCSI2025.16</a>

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mechanochromic luminescent sensing film		
A crystal plasticity-based machine learning model for evaluating subsurface microstructure damage under rolling contact fatigue	Jun Wang, Shuxin Li, Jinhua Chen, Xinqi Han, Siyuan Lu	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.17">https://doi.org/10.53254/ESISTUBE.BECCSI2025.17</a>
Comparative analysis of the accuracy of neural network and analytical methods in modelling fatigue fracture of titanium alloy	Iryna Didych, Oleh Yasniy, Dmytro Tymoshchuk, Oleksandr Holotenko, Viktor Boichun	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.18">https://doi.org/10.53254/ESISTUBE.BECCSI2025.18</a>
Fatigue design of additive manufacturing components: an integrated framework combining machine learning and topology optimization	A. Centola, C. Boursier Niutta, A. Ciampaglia, F. Berto, D.S. Paolino, A. Tridello	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.19">https://doi.org/10.53254/ESISTUBE.BECCSI2025.19</a>
Machine learning-based inverse method for determining elastic coefficients of unsymmetric laminates	Mirko Dinulović, Marta Trninić, Dejan Kožović, Simon Sedmak	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.20">https://doi.org/10.53254/ESISTUBE.BECCSI2025.20</a>
Prediction of SMA hysteresis behaviour by ensemble stacking machine learning	Dmytro Tymoshchuk, Oleh Yasniy, Iryna Didych, Volodymyr Medvid, Andrii Stanko	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.21">https://doi.org/10.53254/ESISTUBE.BECCSI2025.21</a>
Preliminary study on the inverse design of hierarchical spinodoid mechanical metamaterials	Carlo Alberto Greco, Chiara Bertolin, Andrea Tridello, Chao Gao	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.22">https://doi.org/10.53254/ESISTUBE.BECCSI2025.22</a>
Seawater-influence changes in quasi-static performance of composite sandwich structures: a data-driven validation	Amadi Gabriel Udu, Norman Osa-Uwagboe, Maryam Khaksar Ghalati, Sunny Atomode, Francis Anyebe Oteikwu, Hongbiao Dong	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.23">https://doi.org/10.53254/ESISTUBE.BECCSI2025.23</a>
Uncertainty quantification for creep behavior of P91 steel using generalized polynomial chaos expansion and artificial neural networks	Xiaodong Sun, Xiaoyun Su, Peng Wang, Xiaoxiao Li, Gang Chen	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.24">https://doi.org/10.53254/ESISTUBE.BECCSI2025.24</a>
Keynote - Machine learning based solution of solid mechanics tasks	Steffan Hildebrand, Luzie Schmollack, Sandra Klinge	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.25">https://doi.org/10.53254/ESISTUBE.BECCSI2025.25</a>

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Local limit load for RPV nozzles with corner cracks under combined internal pressure and nozzle external loads	Ting Jin, Yang Liu, Dasheng Wang, Yuebing Li	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.26">https://doi.org/10.53254/ESISTUBE.BECCSI2025.26</a>
Long-term structural capacity assessment of an industrial steel chimney	Ognjen Peković, Aleksandar Simonović, Toni Ivanov, Marija Baltić, Milica Ivanović	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.27">https://doi.org/10.53254/ESISTUBE.BECCSI2025.27</a>
Multilayered inhomogeneous viscoelastic rod moving in vertical direction: a delamination analysis	Victor Rizov	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.28">https://doi.org/10.53254/ESISTUBE.BECCSI2025.28</a>
On the distinction between blunt and sharp notched: revisiting the concept of limit notch radius through the averaged SED method	Pietro Foti, Filippo Berto	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.29">https://doi.org/10.53254/ESISTUBE.BECCSI2025.29</a>
Simplified SPSI analysis of cement silo exposed to liquefaction	Boris Folic, Radomir Folic	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.30">https://doi.org/10.53254/ESISTUBE.BECCSI2025.30</a>
3D deep-learning image enhancement for defect characterization in XCT of carbon fiber composites parts	Radmir Karamov, Konstantin Moskalev, Ivan Sergeichev	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.31">https://doi.org/10.53254/ESISTUBE.BECCSI2025.31</a>
CT technology and image post-processing for fiber composites: defect analysis, deep learning, digital volume correlation, and finite element simulation-A review	Lanxin Jiang, Zhen Liao	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.32">https://doi.org/10.53254/ESISTUBE.BECCSI2025.32</a>
Experimental field analysis of damage-failure transition in composite material with a stress concentrator under cyclic loading (application of DIC and X-ray tomography techniques)	Mikhail Bannikov, Yuriy Bayandin, Aleksandr Nikityuk, Sergey Uvarov, Oleg Naimark	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.33">https://doi.org/10.53254/ESISTUBE.BECCSI2025.33</a>
Introduction to neutron imaging at IMAT: radiography, tomography and strain mapping	Ruiyao Zhang, Winfried Kockelmann, Ranggi Ramadhan, Sylvia Britto, Manuel Morgano	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.34">https://doi.org/10.53254/ESISTUBE.BECCSI2025.34</a>
Novel Insights into creep-fatigue interaction under uncommon waveforms	Fan Wu, Yang Liu, Huayue Zhang, Christos Skamniotis, Umer Masood Chaudry,	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.35">https://doi.org/10.53254/ESISTUBE.BECCSI2025.35</a>

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	Ashale Antony Xavier Ramesh, Gareth Douglas, Joe Kelleher, Bo Chen	
Staging of adiabatic shear failure as critical dynamics in microshear ensembles	Mikhail Sokovikov, Sergey Uvarov, Vasiliy Chudinov, Mikhail Bannikov, Oleg Naimar	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.36">https://doi.org/10.53254/ESISTUBE.BECCSI2025.36</a>
Strain monitoring of helicopter landing gear using FBGs during flight operations	Cristian Vendittozzi, Angela Brindisi, Antonio Concilio, Filippo Berto,	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.37">https://doi.org/10.53254/ESISTUBE.BECCSI2025.37</a>
Keynote - Fracture behavior pipe-ring specimens for fracture toughness testing of thin-walled pipelines	Nenad Gubelj,ak, Andrej Likeb, Darko Damjanović, Dražan Kozak, Luka Ferlič	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.38">https://doi.org/10.53254/ESISTUBE.BECCSI2025.38</a>
Analytical and numerical stress analysis on ring specimens for fracture toughness testing	Darko Damjanović, Nenad Gubelj,ak, Dražan Kozak, Mirco D. Chapetti	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.39">https://doi.org/10.53254/ESISTUBE.BECCSI2025.39</a>
Experimental and numerical investigation of reheat cracking mechanisms in 2.25Cr1Mo0.25V weldments	Bin Yang, Wenchun Jiang, Feng Xiong, Zhenhao Jia	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.40">https://doi.org/10.53254/ESISTUBE.BECCSI2025.40</a>
Keynote - As-built CAD Models: A Tool for Fatigue Life Prediction of Additively Manufactured Strut-Based Lattices	S. Murchio, R. De Biasi, M. Laurenti, N. Bonato, S. Carmignato, M. Benedetti, F. Berto	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.41">https://doi.org/10.53254/ESISTUBE.BECCSI2025.41</a>
Anisotropy in LCF property and reliability of PBF-LB/M 316L stainless steel	Xiaotao Zheng, Xiaowei Wang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.42">https://doi.org/10.53254/ESISTUBE.BECCSI2025.42</a>
Design and optimization of bioinspired gyroid lattices under pure torsion	Carolina Schillaci, Simone Murchio, Raffaele De Biasi, Matteo Benedetti, Filippo Berto	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.43">https://doi.org/10.53254/ESISTUBE.BECCSI2025.43</a>
Facet formation mechanism and bridging behavior in high-cycle and very-high-cycle fatigue of metallic materials	Xiangnan Pan, Hang Su, Zhiwei Ma, Qing Peng, Youshi Hong	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.44">https://doi.org/10.53254/ESISTUBE.BECCSI2025.44</a>
Fatigue behavior of miniaturized 316L lattice specimens manufactured by L-	Raffaele De Biasi, Simone Murchio, Rajesh Kumar	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.45">https://doi.org/10.53254/ESISTUBE.BECCSI2025.45</a>

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PBF: influence of build orientation and stress ratio	Meena, Filippo Berto, Ciro Santus, Matteo Benedetti	
Fatigue behavior of miniaturized Ti-6Al-4V lattice struts: comparing continuous and pulsed wave L-PBF	Simone Murchio, Pasquale Gallo, Alberto Fabrizi, Matteo Benedetti, Filippo Berto	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.46">https://doi.org/10.53254/ESISTUBE.BECCSI2025.46</a>
Acceleration data analysis for stamping press health monitoring	Carolina Francisco, Hugo Mesquita Vasconcelos, Susana Dias, Pedro J. S. C. P. Sousa, Paulo J. Tavares, Pedro M. G. J. Moreira, Tiago T. M. Soares, António da S. Guedes	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.47">https://doi.org/10.53254/ESISTUBE.BECCSI2025.47</a>
Shear force in an internal frame connection from a beam under symmetrical linearly distributed load with intensity at the end sections – symmetrical cross section	Albena Doicheva	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.49">https://doi.org/10.53254/ESISTUBE.BECCSI2025.49</a>
Study on the degradation mechanism of mechanical properties of carbon-glass hybrid composites under hygrothermal conditions	Faxiu Zhang, Lanxin Jiang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.50">https://doi.org/10.53254/ESISTUBE.BECCSI2025.50</a>
Temperature change generated longitudinal fracture of inhomogeneous bars with fixed supports	V. Rizov	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.51">https://doi.org/10.53254/ESISTUBE.BECCSI2025.51</a>
Tribological optimization of ultrasonically stir-cast quasi-isotropic composites reinforced with carbide and sulfide using the box-behnken design	Dharmik Chauhan, Manoj Sahni	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.52">https://doi.org/10.53254/ESISTUBE.BECCSI2025.52</a>
A microscopic model for simulating grain boundary diffusion creep in polycrystalline solids	Kazuki Shibamura, Kota Sagara	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.53">https://doi.org/10.53254/ESISTUBE.BECCSI2025.53</a>
AI in metallography	Gábor Balogh, Sándor Pálkás, Erasmus Gozibert	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.54">https://doi.org/10.53254/ESISTUBE.BECCSI2025.54</a>
Application of AI in agricultural machinery maintenance and diagnostics	István Domokos, Sándor Pálkás	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.55">https://doi.org/10.53254/ESISTUBE.BECCSI2025.55</a>

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Artificial intelligence methods for assessing the fracture toughness of materials in a high temperature space environment	Sidnyaev Nikolay Ivanovich, Sineva Elizaveta Evgenievna	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.56">https://doi.org/10.53254/ESISTUBE.BECCSI2025.56</a>
Assessment of welded joint integrity of armour steel SA 500 based on fracture mechanics parameters	M. Manjgo, J. Bernetič, G. Lojen, T. Vuherer	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.57">https://doi.org/10.53254/ESISTUBE.BECCSI2025.57</a>
Comparative evaluation of experimental and phase-field modeling approaches in the tensile response of S1100QL steel	Aleksandar Bodić, Vladimir Dunić, Đorđe Ivković, Dušan Arsić, Miroslav Živković	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.58">https://doi.org/10.53254/ESISTUBE.BECCSI2025.58</a>
Enhancing structural integrity of SLA 3D-printed lattices via AI-Based mechanical response optimization	Marcello Laurenti, Jacopo Tirilló, Fabrizio Sarasini, Filippo Berto	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.59">https://doi.org/10.53254/ESISTUBE.BECCSI2025.59</a>
LSTM prediction of temperature evolution in wire-arc additive manufacturing	Håvard Fagersand, Kjell Magne Mathisen, David Morin, Jianying He, Zhiliang Zhang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.60">https://doi.org/10.53254/ESISTUBE.BECCSI2025.60</a>
Mechanical properties analysis of S355J0W weathering steel repair-welded joints	Damir Tomerlin, Dražan Kozak, Nenad Gubelj	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.61">https://doi.org/10.53254/ESISTUBE.BECCSI2025.61</a>
Mechanical properties of Hf <sub>x</sub> Ta <sub>1-x</sub> C solid solution on AB initio level, Jelena Zagorac,	Tamara Škundrić, Matej Fonovič, Milos Djukić, Milan Pejić, V. Maksimović, J. Schön, D. Zagorac	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.62">https://doi.org/10.53254/ESISTUBE.BECCSI2025.62</a>
Keynote - The Universal Failure Curve for repurposing natural gas pipelines to hydrogen service: assessment of safety margins and comparison with ASME B31.12.	Nicolas Larrosa	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.63">https://doi.org/10.53254/ESISTUBE.BECCSI2025.63</a>
A mechanistic void-based framework for predicting hydrogen embrittlement: does constraint still govern fracture toughness under hydrogen?	Karl Druenes, Jianying He, Zhiliang Zhang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.64">https://doi.org/10.53254/ESISTUBE.BECCSI2025.64</a>
Discrete dislocation dynamics HELPs interpret hydrogen-plasticity interactions	Haiyang Yu	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.65">https://doi.org/10.53254/ESISTUBE.BECCSI2025.65</a>

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Hydrogen embrittlement of WAAM AA2319: tensile properties and fracture analysis	Tinashe Mazarire, Alexander Galloway, Athanasios Toumpis	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.66">https://doi.org/10.53254/ESISTUBE.BECCSI2025.66</a>
Numerical simulation of hydrogen embrittlement coupling in L245 steel pipelines	Weihan Gao, Mu Qin, Weichen Song, Guangxu Cheng, Haijun Hu	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.67">https://doi.org/10.53254/ESISTUBE.BECCSI2025.67</a>
Study of hydrogen-induced cracking in X65 pipeline steel by using the H-CGM+ framework	Yunqi Zhang, Karl Etienne Dany Druenes, Jianying He, Zhiliang Zhang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.68">https://doi.org/10.53254/ESISTUBE.BECCSI2025.68</a>
When hydrogen meets grain boundaries in Nickel	Yu Ding, Haiyang Yu, Zhiliang Zhang, Jianying He	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.69">https://doi.org/10.53254/ESISTUBE.BECCSI2025.69</a>
Keynote - Application of predictive maintenance to freight transport wagons	Rita Sousa, Sandra Fernandes, Antonio Andrade, Paulo Alves, Joao Silva, Tiago Domingues, Pedro Moreira, Virginia Infante	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.70">https://doi.org/10.53254/ESISTUBE.BECCSI2025.70</a>
Crashworthiness evaluation of a railway coach: numerical study toward certification and failure mitigation	Christian Silva, Rogério Lopes, Alexandre Löw, Pedro Moreira, João Silva, R. Andrade	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.71">https://doi.org/10.53254/ESISTUBE.BECCSI2025.71</a>
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Research on bulging deformation and cracking patterns of long-term serviced Cr-Mo steel coke drums	Chuang Yu, Zhiyuan Han, Hao Zhou, Guoshan Xie	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.76">https://doi.org/10.53254/ESISTUBE.BECCSI2025.76</a>
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Predicting fatigue performance of additively manufactured Ti-6Al-4V alloy from material to structural scale using multiscale model simulations	Hongchang Zhou, Weiqian Chi, Wenjing Wang, Ruiguo Yan, Yoshiki Mikami	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.82">https://doi.org/10.53254/ESISTUBE.BECCSI2025.82</a>
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Study of tank for liquid with taking into account the succession of filling-up and running off	Victor Rizov	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.84">https://doi.org/10.53254/ESISTUBE.BECCSI2025.84</a>
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Influence of load ratio on fatigue crack propagation in additively manufactured TiAlV CT specimens	Vittorio Di Cocco	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.91">https://doi.org/10.53254/ESISTUBE.BECCSI2025.91</a>
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	Bernardo Disma Monelli, Adriana Mento, Angelo Donato, Renzo Valentini	
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Experimental characterization and phase-field implementation of anisotropic hydrogen-assisted fracture in layered metals	Alvaro Ovalle, Ruben Perdiguero, Andres Diaz Portugal	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.100">https://doi.org/10.53254/ESISTUBE.BECCSI2025.100</a>
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Discrete approaches to dynamic fracture problems. Inertia of the dynamic fracture process	Nikita Kazarinov, Yuri Petrov	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.121">https://doi.org/10.53254/ESISTUBE.BECCSI2025.121</a>
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Rapid prediction of high-cycle fatigue properties of high-entropy alloys based on slip irreversibility localization	Dongxing Pan, Xiaogang Wang, Chao Jiang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.123">https://doi.org/10.53254/ESISTUBE.BECCSI2025.123</a>
Keynote - Combined approach for integrity assessment of welded joints with multiple defects	Simon Sedmak, Mihajlo Arandžević, Branislav Đorđević, Ana Petrović, Radomir Jovičić	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.124">https://doi.org/10.53254/ESISTUBE.BECCSI2025.124</a>

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Fabrication of multi-material structures from austenitic to ferritic stainless steels via dualwire arc additive manufacturing	Yipu Xu, Run-zi Wang, Yutaka S. Sato, Kiyoaki Suzuki, Yue Zhao, Zongli Yi, Aiping Wu	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.126">https://doi.org/10.53254/ESISTUBE.BECCSI2025.126</a>
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Solid-state norbornadiene photo-thermal films for efficient solar energy storage	Yu Han, Wenbo Tian, Fei Song, Jialin Fu, Dongxing Song, Ke Wang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.128">https://doi.org/10.53254/ESISTUBE.BECCSI2025.128</a>
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3D Damage evolution in SiCf/SiC composites at 1800°C: a quantitative study of pores and strain fields by in-situ $\mu$ CT and DVC	Bo Zhang, Lanxin Jiang	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.131">https://doi.org/10.53254/ESISTUBE.BECCSI2025.131</a>
Damage-based framework for fatigue life prediction of filament-wound composites under multiaxial cyclic loading	Szymon Duda, Michał Smolnicki, Paweł Zielonka, Grzegorz Lesi	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.132">https://doi.org/10.53254/ESISTUBE.BECCSI2025.132</a>
Effect of low-temperature gaseous carburizing on the fretting fatigue behavior of AISI 316L austenitic stainless steel	Zhenxu Zhao, Yawei Peng, Jianming Gon	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.133">https://doi.org/10.53254/ESISTUBE.BECCSI2025.133</a>
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Keynote - Measurement of interfacial adhesion in a Thermal Barrier Coating system on Ni-based superalloys: effect of test configuration	Elena Fedorova, Egor Moskvichev, Andrey Burov, Nadezhda Sukhodoeva	<a href="https://doi.org/10.53254/ESISTUBE.BECCSI2025.138">https://doi.org/10.53254/ESISTUBE.BECCSI2025.138</a>



