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Publications

Peer-reviewed journal publications

- 2020 Luca Di Stasio, Janis Varna, Zoubir Ayadi (2020). **Effect of the proximity to the $0^\circ/90^\circ$ interface on Energy Release Rate of fiber/matrix interface crack growth in the 90° -ply of a cross-ply laminate under tensile loading**
Journal of Composite Materials, 54(21), pp. 3021-3034.
DOI: 10.1177/0021998320912810
- Luca Di Stasio, Janis Varna, Zoubir Ayadi (2020). **Growth of interface cracks on consecutive fibers: On the same or on the opposite sides?**
Materials Today: Proceedings, In press, corrected proof.
DOI: 10.1016/j.matpr.2020.06.410
- 2019 Luca Di Stasio, Zoubir Ayadi (2019). **Finite Element solution of the fiber/matrix interface crack problem: convergence properties and mode mixity of the Virtual Crack Closure Technique**
Finite Elements in Analysis and Design, 167, 103332.
DOI: 10.1016/j.finel.2019.103332
- Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Energy release rate of the fiber/matrix interface crack in UD composites under transverse loading: Effect of the fiber volume fraction and of the distance to the free surface and to non-adjacent debonds**
Theoretical and Applied Fracture Mechanics, 103.
DOI: 10.1016/j.tafmec.2019.102251

Conference proceedings

- 2019 Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Estimating the average size of fiber/matrix interface cracks in UD and cross-ply laminates**
Proceedings of the 7th ECCOMAS Thematic Conference on the Mechanical Response of Composites (Composites 2019), Eds: A. Turon, P. Maimi, M. Fagerstrom - Girona, Spain - September 18-20th, 2019
- Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Growth of interface cracks on consecutive fibers: on the same or on the opposite sides?**
Proceedings of the 12th International Conference on Composite Science and Technology (ICCST/12) - Sorrento, Italy - May 8-10th, 2019
- 2018 Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Effect of boundary conditions on microdamage initiation in thin ply composite laminates**
Proceedings of the 18th European Conference on Composite Materials (ECCM18) - Athens, Greece - June 24-28th, 2018

Conference contributions & Seminars

- 2019 Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Estimating the average size of fiber/matrix interface cracks in UD and cross-ply laminates**
7th ECCOMAS Thematic Conference on the Mechanical Response of Composites (Composites 2019) - Girona, Spain - September 18-20th, 2019
- Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Ply-thickness effect on fiber-matrix interface crack growth**
9th International Conference on Composite Testing and Model Identification (COMPTEST2019) - May 27-29, 2019 - Luleå, Sweden
- Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Growth of interface cracks on consecutive fibers: on the same or on the opposite sides?**
12th International Conference on Composite Science and Technology (ICCST/12) - Sorrento, Italy - May 8-10th, 2019
- Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Investigation of scaling laws of the fiber/matrix interface crack in polymer composites through finite element-based micromechanical modeling**
10th EEIGM International Conference on Advanced Materials Research - April 25-26, 2019 - Moscow, Russia
- 2018 Luca Di Stasio, Janis Varna, Zoubir Ayadi (2018). **Effect of boundary conditions on microdamage initiation in thin ply composite laminates**
18th European Conference on Composite Materials (ECCM18) - June 24-28, 2018 - Athens, Greece
- 2017 Luca Di Stasio, Janis Varna, Zoubir Ayadi (2017). **Micromechanical models of transverse cracking in ultra-thin Fiber-Reinforced composite laminates**
Journée de l'équipe 304 de l'IJL - July 5, 2017 - Nancy, France
- Luca Di Stasio, Janis Varna, Zoubir Ayadi (2017). **Micromechanical modeling of thin ply effects on microdamage in Fiber Reinforced Composite laminates**
International Materials Research Meeting of the Greater Region (IMRM) - April 6-7, 2017 - Saarbrücken, Germany

Poster contributions

- 2017 Luca Di Stasio, Janis Varna, Zoubir Ayadi (2019). **Micromechanical Models of Transverse Cracking in Ultra-thin Fiber-Reinforced Composite Laminates**
Seminar of the Doctoral School EMMA (now C2MP) - Nancy, France - May 4, 2017

Theses

- 2019 Luca Di Stasio (2019). **Effet de la microstructure sur le décollement à l'interface fibre/matrice dans les stratifiés à matrice polymère avec renfort en fibre soumis à traction**
Thèse de doctorat en Sciences des matériaux
Soutenue le 13 décembre 2019 à l'Université de Lorraine en cotutelle avec Luleå University of Technology (Suède), dans le cadre de l'École doctorale C2MP - Chimie mécanique matériaux physique (Université de Lorraine), en partenariat avec l'Institut Jean Lamour, Nancy (laboratoire).
- 2013 Luca Di Stasio (2013). **Experimental, Analytical and Numerical Investigation of Loading Rate Effects on Mode I, Mode II and Mixed Mode I-II Delamination in Advanced CFRP**
Master Thesis, MSc in Space Engineering - Politecnico di Milano (Milano, Italy)