THE UNIVERSITY OF BRITISH COLUMBIA

Publications Record

SURNAME: Sadeghzadeh Milani **FIRST NAME**: Abbas **Initials**: ___ASM____
MIDDLE NAME (S): **Date** July 25, 2022

In all publications that I have been the principal investigator/co-investigator of the corresponding project, the order of student author names has been decided based on their individual contributions. Student/visiting scholar names are in bold. The nature of my involvement in each article has been indicated by a superscript 'a', 'b', or 'c' as follows.

a: I was the principal investigator/co-investigator; the topic fell within my primary field of expertise: composite materials and forming processes; directly involved in writing sections of the article.

b: I was the principal investigator/co-investigator of the project; the topic fell within my secondary field of expertise: multi-criteria decision making and optimization; directly involved in writing sections of the article.

c: Collaborated in the project; gave feedback on particular aspects of the work related to one of aforementioned fields of expertise/ wrote at least a section of the paper.

1. REFEREED PUBLICATIONS

(a) *Journals*

[1] **T. Olfatbakhsh**, J. L. Andrews, A. S. Milani[a] (2022) "Materials informatics of woven fabric composites: Effect of different dimensionality reduction and learning methods", Materials Today Communications (in press)

[2] **T. Sloos, B. Rustand, X. Liu, C. Keegan, R. Sourki,** A. S Milani[b] (2022) "A multi-criteria decision analysis of implanted biomedical device antenna: electro-thermal simulation, design, and data analysis", Simulation (in press)

[3] **S. F. Musolino**, **M Mahbod**, **R. Nazir**, **L. Bi**, **H. H. Graham**, A. S Milani[c], J. E. Wulff (2022) "Electronically optimized Diazirine-based polymer crosslinkers", Polymer Chemistry (published by the Royal Society of Chemistry). In press.

[4] **R. Vahed**, **H. R. Zareie Rajani**, A. S Milani[a] (2022) "Can a black-box AI replace costly DMA testing? —A case study on prediction and optimization of dynamic mechanical properties of 3D printed Acrylonitrile Butadiene Styrene", Materials, 15: 2855

[5] **R. Nazir**, **L. Bi**, **S. F. Musolino**, **O. H. Margoto**, **K. Çelebi**, **C. Mobuchon**, **M. Takaffoli**, A. S Milani[c], G. Falck, J. E Wulff (2022) "Polyamine–Diazirine conjugates for use as primers in UHMWPE–epoxy composite materials", ACS Applied Polymer Materials, 4: 1728–1742

[6] **F. Gholamreza**, K. Golovin, A. S. Milani[c], **A. Pillai** (2022) "Enhanced protection face masks do not adversely impact thermophysiological comfort", Plos One (in press)

[7] **D. K. Dhir**, **R. Osmond**, K Golovin, A S. Milani[a] (2022) "A high-performance hybrid green composite using *plastinated* bamboo fillers, with reduced environmental degradation effect", Composite Structures, 282: 115123

[8] **R. Sourki**, **B. Crawford**, R. Vaziri, A S. Milani[a] (2022) "Meso-level bending/reverse-bending analysis of dry woven fabrics: observing an irreversible behavior during forming", Composite Structures, 282: 115124

[9] **T. Olfatbakhsh**, A. S. Milani[a] (2022) “A highly interpretable materials informatics approach for predicting microstructure-property relationship in fabric composites”, Composites Science and Technology, 217(5): 109080

[10] **M. L. Lepage**, **M. Takaffoli**, **C. Simhadri**, R. Mandau, M. Parvinzadeh Gashti, **R. Nazir**, **M. Mohseni**, **W. Li**, **C. Liu**, **L. Bi**, G. Falck, P. Berrang, K. Golovin, A. S. Milani[c], G. A. DiLabio, J. E. Wulf (2021) “Influence of topical cross-linking on mechanical and ballistic performance of a woven ultra-high-molecular-weight polyethylene fabric used in soft body Armor”, ACS Applied Polymer Materials, 3(11): 6008–6018

[11] **D. Nikam**, A.S. Milani[a] (2021) “Effect of fiber orientation on the stresses generated in dental crowns made of glass fiber composites”, Composite Structures, 279: 114790

[12] **H. Goleij**, **R. T. Faal**, A. R. Fotuhi, A. S. Milani[c] (2022) “A generalization and application of the Michell solution for functionally graded circular planes”, The Journal of Applied Mathematics and Physics (ZAMP), 73: 8

[13] **A. Rashidi, B. Crawford, T. Olfatbakhsh**, A. S. Milani[a] (2021) “A mixed lubrication model for inter-ply friction behaviour of uncured fabric prepregs composites”, Composites Part A, 149: 106571

[14] **M. Jahandar**, A. S. Milani[a] (2021) “"Multiphysics modeling and experimental investigation of the deposition process in fused filament fabrication method, under high-viscous and non-Newtonian material flow”, Special Issue: Additive Manufacturing, Journal of Materials Engineering and Performance, 9: 02-08-2021

[15] **R. Osmond**, **Z. Mollahoseini**, **J. Singh, A. Gautam**, R. Seethaler, K. Golovin, A. S. Milani[a] (2021) “A group multicriteria decision making with ANOVA to select optimum parameters of drilling flax fibre composites: A case study”, Composites Part C, 5: 100156

[16] **E. Davoodi**, **H. Montazerian**, **R. Esmaeilizadeh**, **A Darabi**, **A. Rashidi**, J. Kadkhodapour, H. Jahed, M. Hoorfar, A. S. Milani[c], P. Weiss, A. Khademhosseini, E. Toyserkani (2021) “Additively manufactured gradient porous Ti-6Al-4V hip replacement implants embedded with cell-Laden Gelatin Methacryloyl Hydrogels”, ACS Applied Materials & Interfaces, 13: 22110–22123

[17] **R. T. Faal**, **R. Sourki**, **B. Crawford**, A.S. Milani[a] (2021) “Experimental, numerical and analytical investigation of the torsional vibration suppression of a shaft with multiple optimal undamped absorbers”, Journal of Vibration Engineering & Technologies, 9: 1269–1288

[18] **B. Crawford**, H. Khayyam, A. S. Milani[a] (2021) “A mini-review and perspective on current best practice and emerging Industry 4.0 methods for risk reduction in advanced composites manufacturing”, Open Journal of Composite Materials, 11(2):31-45

[19] **S. Hasanpour**, **A. Rashidi**, **T. Walsh**, **E. Pagan**, A. S. Milani[c], M. Akbari, N Djilali (2021) “Electrode-integrated textile-based sensors for in situ temperature and relative humidity monitoring in electrochemical cells”, ACS Omega (in press)

[20] H.Khayyam, M. Naebe, A. S. Milani[c], M. Fakhrhoseini, A, Date, B. Shabani, S. Atkiss, S. Ramakrishna, B. Fox,R. N.Jazara (2021) “Improving energy efficiency of carbon fiber manufacturing through waste heat recovery: A circular economy approach with machine learning”, Energy, 225: 120113

[21] **M. Ramezankhani**, **B. Crawford**, A, Narayana, H. Voggenreiter, R. Seethaler, A, S. Milani[a] (2021) “Making costly manufacturing smart with transfer learning under limited data: a case study on composites autoclave processing”, Journal of Manufacturing Systems, 59: 345-354

[22] **C. Simhadri**, **M. L. Lepage**, **L Bi**, **M. Takaffoli**, **Z. Pei**, A. S. Milani[c], G. A. DiLabio, J. E. Wulff (2021) "Flexible polyfluorinated bis-diazirines as molecular adhesives", Chemical Science, 12: 4147

[23] **A. Rashidi, J. P.-H. Belnoue, A. J. Thompson,** S. R. Hallett, A. S. Milani[a] (2021) "Consolidation-driven wrinkling in carbon/epoxy woven fabric prepregs: An experimental and numerical study", Composites Party A, 143: 106298

[24] **S. Akbari, A. Bahi, A. Farahani,** A. S. Milani[c], F. Ko (2021) "Fabrication and characterization of lignin/dendrimer electrospun blended fiber mats", Molecules -- Special issue: Biocomposites – A Path Towards Circular Economy, 26(3): 518

[25] **A. Rashidi, H. Montazerian**, A. S. Milani[a] (2021) "Slip-Bias Extension test: A characterization tool for understanding and modeling the effect of clamping conditions in forming of woven fabrics", Composite Structures, 260 (15):113529

[26] **R. Sourki**, **B. Crawford**, R. Vaziri, A. S. Milani[a] (2021) "Orientation dependency and hysteresis nature of inter-ply friction in woven fabrics", Applied Composite Materials, 28(1): 113-127

[27] **S. Saraygord Afshari**, S. H. Pourtakdoust, **B. J. Crawford**, R. Seethaler, A. S. Milani[a] (2021) "Time-varying structural reliability assessment method: application to fiber reinforced composites under repeated impact loading", Composite Structures, 261: 113287

[28] **M. M. Omrani**, **H. Kumar**, **M. G. A. Mohamed**, K. Golovi, A. S. Milani[c], A. Hadjizadeh, K. Kim (2021) "Polyether ether ketone surface modification with plasma and gelatin for enhancing cell attachment", Journal of Biomedical Materials Research Part B: Applied Biomaterials,109:622–629

[29] **B. Crawford**, **J. Torres**, A. S. Milani[a] (2020) "Minimizing corner cracking during the de-moulding process of industrial-size GFRP components: a case study", The International Journal of Advanced Manufacturing Technology, 111(3): 711-723

[30] **A. Rashidi, T. Olfatbakhsh, B. Crawford**, A. S. Milani[a] (2020) "A review of current challenges and case study toward optimizing micro-computed X-ray tomography of carbon fabric composites", Materials (Special Issue: Advances in Fiber-Reinforced Polymer Composites), 13(16): 3606

[31] **D. Motamedi**, **M. Takaffoli,** A. S. Milani[a] (2020) "Nonlinear XFEM modeling of mode II delamination in PPS/Glass unidirectional composites with uncertain fracture properties", Materials (Special Issue: Numerical and Analytical Modeling of Anisotropic Fiber-Based Materials), 13(16): 3548

[32] **B. Crawford**, **K. M. S. Rashif**, **A. Rashidi**, R Sadiq, A. S. Milani[a] (2020) "A Bayesian belief approach to quality control of resin transfer molding process", The International Journal of Advanced Manufacturing Technology, 109: 953–1968

[33] **E. Aghaie**, **J. Stroh,** D. Sediako, **A. Rashidi**, A. S. Milani[c] (2020) "Improving the mechanical properties of the B319 aluminum alloy by addition of cerium", Materials Science and Engineering: A, 793:139899

[34] **M. Karimi**, **M. R. Farajpour**, **S. Rafieian**, A. S. Milani[c], H. Khayyam (2020) "Surface energy layers investigation of intelligent magnetoelectrothermoelastic nanoplates through a vibration analysis", The European Physical Journal Plus, 135: 488

[35] **E. Davoodi**, **M. Zhianmanesh**, **H. Motazerian,** A.S. Milani[c], M. Hoorfar (2020) “Nano-porous anodic Alumina: Fundamentals and applications in tissue engineering”, Journal of Materials Science: Materials in Medicine, 31: 60

[36] **H. Motazerian**, M. Hoorfar, A.S. Milani[a] (2020) “Integrated sensors in advanced composites: A critical review”, Critical Reviews in Solid State and Materials Sciences, 45(3): 187-238

[37] **R. T. Faal**, **R. Sourki**, **B. Crawford**, R. Vaziri, A.S. Milani[a] (2020) “Using fractional derivatives for improved viscoelastic modeling of textile composites. Part II: fabric under different temperatures”, Composite Structures, 248: 112494

[38] **R. Sourki**, **R. T. Faal**, A. S. Milani[a] (2020) “Vibration analysis of orthotropic functionally graded composite plates in thermal environment using high-order shear deformation theory: Frequency suppression by tuning the in-plane forces”, International Journal of Applied and Computational Mathematics; 6:59

[39] **R. T. Faal**, **R. Sourki**, **B. Crawford**, R. Vaziri, A.S. Milani[a] (2020) “Using fractional derivatives for improved viscoelastic modeling of textile composites. Part I: fabric yarns”, Journal of Composite Materials, 54(23): 3245–3260

[40] H. Liu, S. Liu, Z. Liu, N. Mrad, A. S. Milani[c] (2020) “Data-driven approaches for characterization of delamination damage in composite materials”, IEEE Transactions on Industrial Electronics (in press)

[41] **A. Ashkarran**, **T. Olfatbakhsh**, **M. Ramezankhani**, R. C. Crist, W. H. Berrettini**,** A. S. Milani[c], S. Pakpour, M. Mahmoudi (2020) “Evolving magnetically levitated plasma proteins detects opioid use disorder as a model disease”, Advanced Healthcare Materials, 9(5): 1901608

[42] **E. Davoodi**, **H. Montazerian**, **R. Haghniaz**, **A. Rashidi**, **S. Ahadian**, **A. Sheikhi,** J. Chen, A. Khademhosseini, A. S. Milani[c], M. Hoorfar, E. Toyserkani (2020) "3D-printed ultra-robust surface-doped porous silicone sensors for wearable biomonitoring", ACS Nano, 14(2): 1520-1532

[43] **D. K. Dhir**, **A. Rashidi**, G. Bogyo, R. Ryde, S. Pakpour, A. S. Milani[a] (2020) “Environmental durability enhancement of natural fibres using plastination: a feasibility investigation on bamboo”, Molecules -- Special issue: Biocomposites – A Path Towards Circular Economy, 25(3): 474

[44] **M. L. Lepage**, **C. Simhadri**, **C. Liu**, **M. Takaffoli**, **L. Bi**, **B. Crawford**, A. S. Milani[c], J. E. Wulff (2020) "A broadly applicable crosslinker for Aliphatic Polymers Containing C–H bonds", Science, 366 (6467): 875-878

Note: The research was jointly with University of Victoria, and it was featured in the Chemical & Engineering News, by the American Chemical Society, as well as Science Daily and Daily Mail.

[45] **D. Karimi**, **B. Crawford**, A. S. Milani[a] (2020) “Manufacturing process and mechanical properties of a novel acrylonitrile butadiene styrene-based composite, with recycled natural granite micro-particles”, Manufacturing Letters, 23: 79-84

[46] **H. Daghigh**, **V. Daghigh**, A. S. Milani[c], D. Tannant, J.N. Reddy (2020) “Nonlocal bending and buckling of agglomerated CNT-reinforced composite nanoplates”, Composites Part B, 183: 107716

[47] **A. Rashidi**, **H. Montazerian**, **K. Yesilcimen**, A.S. Milani[a] (2020) “Experimental characterization of the inter-ply shear behavior of dry and prepreg woven fabrics: Significance of mixed lubrication mode during thermoset composites processing”, Composites Part A, 129: 105725

[48] **V. Rabbani**, **M. Hodaei**, A. S. Milani[c] (2019) “An enhanced conformal contact modeling of the cylindrical roller bearings with inclusion of roughness effect”, Journal of Adhesion Science and Technology, 369-387

[49] **V. Rabbani**, **M. Hodaei**, **R. T. Faal**, A. S. Milani[c] (2019) “Free vibration analysis of infinitely long thick-walled hollow elliptical cylinder”, Springer Nature Applied Sciences, 1:1295

[50] **D. Karimi**, A. S. Milani[a], (2019) “SRVE modeling of particulate polymer matrix composites with irregularly shaped inclusions: Application to a green stone composite”, Composite Structures, 228: 111331

[51] **D. Karimi**, A. S. Milani[a], **F. Alavi** (2019) “Recycled stone/ABS particulate composite: Micromechanical finite element fracture analysis”, Composites Part B, 177: 107315

[52] **H. Montazerian**, **M.G.A. Mohamed**, **M. M. Montazeri**, **S. Kheiri**, A. S. Milani[c], K. Kim, M. Hoorfar (2019) “Permeability and mechanical properties of gradient porous PDMS scaffolds fabricated by 3D-printed sacrificial templates designed with minimal surfaces”, Acta Biomaterialia, 96(15): 149-160

[53] **H. Souzangarzadeh**, A. Jahan M. J. Rezvani, A. S. Milani[b] (2019) “Multi-objective optimization of cylindrical segmented tubes as energy absorbers under oblique crushes: D-optimal design and integration of MULTIMOORA with combinative weighting”, 62: 249–268

[54] **M. Ramezankhani**, **B. Crawford**, H. Khayyam, M. Naebe, R. Seethaler, A.S. Milani[a] (2019) “A multi-objective Gaussian process approach for optimization and prediction of carbonization process in carbon fiber production under uncertainty”, Advanced Composites and Hybrid Materials; 2(3): 444-455

[55] **G. Golkarnarenji**, M. Naebe, K. Badii, A. S. Milani[c], A. Bab-Hadiashar, R. N. Jazar, H. Khayyam (2019) “Multi-objective optimization of manufacturing process in carbon fiber industry using artificial intelligence techniques”, IEEE Access, 7: 67576- 67588

[56] **S. Sultana**, **A. Rashidi**, **M. Islam**, **B. Crawford**, A. S. Milani[a] (2019) “Towards reliability-enhanced mechanical characterization of non-crimp fabrics: How to compare two force-displacement curves against a null material hypothesis”, Open Journal of Composite Materials, 9: 164-182

[57] **H. Montazerian**, **A. Rashidi**, **A. Dalili**, H. Najjaran, A. S. Milani[b], M. Hoorfar (2019) “Graphene coated Spandex sensors embedded into silicone sheath for composites health monitoring and wearable applications”, Small, 15(17): 1804991

[58] **H. Montazerian**, **A. Rashidi**, M. Hoorfar, A. S. Milani[a] (2019) “A frameless picture frame test with embedded sensor: Mitigation of imperfections in shear characterization of woven fabrics”, Composite Structures, 211: 112-124

[59] **H. Montazerian**, **A. Dalili**, A. S. Milani[a], M. Hoorfar (2019) “Piezoresistive sensing in chopped carbon fiber embedded PDMS yarns”, Composites Part B, 164: 648-658

[60] **G. Golkarnarenji**, M. Naebe, K. Badii, A.S. Milani[b], R. Jazar, H. Khayyam (2018) “A machine learning case study with limited data for prediction of carbon fiber mechanical properties”, Computers in Industry, 105: 123-132

[61] K. Badii, **G. Golkarnarenji**, A.S. Milani[b], M. Naebe, H. Khayyam (2018) “A comprehensive chemical model for the preliminary steps of thermal stabilization process in carbon fibre manufacturing line”, Reaction Chemistry & Engineering, 3: 959-971

[62] **M. Kamali**, K. Hewage, A. S. Milani[c] (2018) “Life cycle sustainability performance assessment framework for residential modular buildings: Aggregated sustainability indices”, Building and Environment, 138: 21-41

[63] **A. Rashidi**, A. S. Milani[a] (2018) ”A multi-step biaxial bias extension test for wrinkling/de-wrinkling characterization of woven fabrics: Towards optimum forming design guidelines”, Materials and Design, 146: 273-285

[64] **G. Golkarnarenji**, M. Naebe, K. Badii, A.S. Milani[b], R. N. Jazar, H. Khayyam (2018) “Production of low cost carbon-fiber through energy optimization of stabilization process”, Materials, 11, 385

[65] **M.H. Kashani, A. Hosseini**, F. Sassani, F.K. Ko, A.S. Milani[a] (2018) “The role of intra-yarn shear in integrated multi-scale deformation analyses of woven fabrics: A critical review”, Critical Reviews in Solid State and Materials Sciences, 43(3): 213-232

[66] **A. Hosseini**, **M.H. Kashani**, F. Sassani, A. S. Milani[a], F.K. Ko (2018) “Identifying the distinct shear wrinkling behavior of woven composite preforms under bias extension and picture frame tests”, Composite Structures, 185(1): 764-773

[67] H. Zhou, C. Li, L. Zhang, **B. Crawford**, A. S. Milani[c], F. Ko, (2018) “Micro-XCT analysis of damage mechanisms in 3D circular braided composite tubes under transverse impact”, Composites Science and Technology, 55(8): 91-99

[68] **G. Golkarnarenji**, M. Naebe, K. Badii, A.S. Milani[b], R. N. Jazar, H. Khayyam (2018) “Support vector regression modelling and optimization of energy consumption in carbon fiber production line”, Computers and Chemical Engineering, 109: 276–288

[69] **A. Rashidi**, A. S. Milani[a] (2018) “Passive control of wrinkles in woven fabric preforms using a geometrical modification of blank holders”, Composites Part A, 105: 300-309

[70] **B. Crawford**, **S. Pakpour**, **N. Kazemian**, J. Klironomos, K. Stoeffler, D. Rho, J. Denault, A. S. Milani[a] (2017) “Effect of fungal deterioration on physical and mechanical properties of hemp and flax natural fiber composites”, Materials, 10: 1252

[71] **A. Hosseini**, **M.H. Kashani**, F. Sassani, A. S. Milani[a], F.K. Ko (2017) “A mesoscopic analytical model to predict the onset of wrinkling in plain woven preforms under bias extension shear deformation”, Materials, 10(10): 1184

[72] **M.H. Kashani, A. Hosseini**, F. Sassani, F.K. Ko, A.S. Milani[a] (2017) “Understanding different types of coupling in mechanical behaviour of woven fabric reinforcements: A critical review and analysis”, Composite Structures, 179: 558–567

[73] H. Khayyam, S.**M. Fakhrhoseini**, **J. S. Church**, A. S. Milani[b], **R. Zamani**, A. Bab-Hadiashar, R. Jazar, M. Naebe (2017) “Predictive modelling and optimization of carbon fiber mechanical properties through high temperature furnace”, Applied Thermal Engineering, 125: 1539–1554

[74] **Y. Mosaferi**, **B. Crawford**, **J. Torres**, A. S. Milani[a] (2017) “On static and dynamic friction characterization of tool-fiber interaction: Effect of mould type and processing conditions”, MOJ Polymer Science, 1(2): 1-7; also presented at the Canadian - International Conference on Composites (CANCOM15)

[75] **M. Shah Mohammadi**, **M. Ghani**, **M. Komeili**, **B. Crawford**, A.S. Milani[a] (2017) “The effect of manufacturing parameters on the surface roughness of glass fibre reinforced polymer moulds”, Composites Part B, 125: 39-48.

[76] **M. Heinrick**, **B. Crawford**, A. S. Milani[a] (2017) “Degradation of fibreglass composites under natural weathering conditions”, MOJ Polymer Science, 1: 1-8; also presented at the Canadian - International Conference on Composites (CANCOM15)

[77] **H. Montazerian**, **M. Zhianmanesh**, **E. Davoodi**, A. S. Milani[c], M. Hoorfar (2017) “Longitudinal and radial permeability analysis of additively manufactured porous scaffolds: Effect of pore shape and porosity”, Materials and Design, 122: 146-156

[78] **M. Tehrani, F. Hedayati Dezfuli,** Shahria Alam, A. S. Milani[c] (2017) “Parametric study on mechanical responses of corrugated-core sandwich panels for bridge decks”, Journal of Bridge Engineering, 22(5): 1-14

[79] **M. Yaghoubshahi**, M. M. Alinia, A. S. Milani[c] (2017) “Master S-N curve approach to fatigue prediction of breathing web panels”, Journal of Constructional Steel Research, 128: 789–799

[80] **H. Teimouri,** A. S. Milani[a], J. Loeppky, R. Seethaler (2017) “A Gaussian Process-based approach to cope with uncertainty in structural health monitoring, (Int’l. Journal of) Structural Health Monitoring, 16(2): 174–184

[81] **S. Moallemi Pour**, S. Alam, A. S. Milani[c] (2016) “Improved bond equations for fiber reinforced polymer bars in concrete”, Materials, 9:737 (pp. 1-14)

[82] **M. Komeili**, A. S. Milani[a] (2016) “On effect of shear-tension coupling in forming simulation of woven fabric reinforcements”, Composites Part B, 99:17-29

[83] **M. Haghi Kashani**, **A. Rashidi**, **B. Crawford**, A. S. Milani[a] (2016) “Analysis of a two-way tension-shear coupling in woven fabrics under combined loading tests: Global to local transformation of non-orthogonal normalized forces and displacements”, Composites Part A, 88: 272–285

[84] **H. Teimouri,** A. S. Milani[a], R. Seethaler, **A. Heidarzadeh** (2016) “On the impact of manufacturing uncertainty in structural health monitoring of composite structures: A signal to noise weighted neural network process”, Open Journal of Composite Materials, 6: 28-39

[85] **M. Alemi-Ardakani**, A. S. Milani[a], S. Yannacopoulos, G. Shokouhi (2016) “On the effect of subjective, objective and combinative weighting in multiple criteria decision making: A case study on impact optimization of composites”, Expert Systems with Applications, 46(15): 426–438

[86] **N. Feito**, A.S. Milani[a], A. Muñoz-Sánchez (2016) “Drilling optimization of woven CFRP laminates under different tool wear conditions: A multi-objective design of experiments approach", Structural and Multidisciplinary Optimization, 53(2): 239-251

[87] **F. Islam**, J. Ramkumar, A. S. Milani[b] (2015) “A simplified damage prediction framework for milling of unidirectional carbon fiber reinforced plastics”, Advanced Manufacturing: Polymer and Composites Science, 1(4): 175–184

[88] **M. Shah Mohammadi**, **M. Komeili**, A. B. Phillion, A. S. Milani[a] (2015) “Toward better understanding of the effect of fiber distribution on effective elastic properties of composite yarns”, Computers and Structures, 163(15): 29–40

[89] **H. Alhassan**, B. Naser, A. S. Milani[c], **S. Nunoo** (2015) "Decision making for capacity expansion of water supply systems", Journal of Water Resource and Protection, 7(16): 1280-1290

[90] **M. Alemi-Ardakani**, A. S. Milani[a], S. Yannacopoulos, H. Borazghi (2015) "A rapid approach for predication and discrete lay-up optimization of glass fiber/polypropylene composite laminates under impact", International Journal of Impact Engineering, 84: 134–144

[91] **S. Moradi**, S. Alam, A. S. Milani[c] (2015) "Cyclic response sensitivity of post-tensioned steel connections using sequential fractional factorial design", Journal of Constructional Steel Research, 112: 155–166

[92] **A. Ardeshirilajimi**, **A. Aghanouri**, **A. Abedian**, A.S. Milani[b] (2015) "An exponential placement method for materials selection", International Journal of Advanced Manufacturing Technology, 78(1-4): 641-650

[93] **J. Taylor**, **J. Parisien**, **W. Truman**, **M. Saunders**, A.S. Milani[b], A. Jahan, J. Seabrook (2015) "Drive system selection in lightweight design of a portable core drill: A group decision making approach", International Journal of Engineering and Technical Research, 3(1):42-47

[94] **M. Nourani**, A. S. Milani[b], S. Yannacopoulos (2015) "On experimental optimization of friction stir welding of aluminum 6061: understanding processing-microstructure-property relations", International Journal of Advanced Manufacturing Technology, 79(9), 1425-1441

[95] **M. Alemi-Ardakani**, A. S. Milani[a], S. Yannacopoulos, G. Shokouhi (2015) "A multicriteria experimental analysis of impact on fiber reinforced polymer composite laminates", Materials Today Communications, 4:6-15

[96] R. T. Faal, **A. Aghsam**, A. S. Milani[c] (2015) "Stress intensity factors for cracks in functionally graded annular planes under anti-plane loading", International Journal of Mechanical Sciences, 93: 73–81

[97] **H. Rokni**, A. S. Milani[a], R. J. Seethaler (2015) "Size-dependent vibration behavior of axially functionally graded MWCNT-reinforced polymer composite microcantilevers: modeling and optimization", European Journal of Mechanics: A/Solids, 49: 26–34. **(Listed among The most downloaded articles from ScienceDirect®; publisher: ELSEVIER).**

[98] M. Mahmoudi, **S. Sheibani**, A. S. Milani[c], **F. Rezaee**, **M. Gauberti**, **R. Dinarvand**, H. Vali (2015) "Crucial role of the protein corona for the specific targeting of nanoparticles", Future Medicine: Nanomedicine, 10(2): 215-226

***Note*: The above publication was the result of an international, highly inter-disciplinary research project between Faculty of Pharmacy (Tehran University), School of Medicine (Stanford University), School of Engineering (University of British Columbia), Department of Anatomy and Cell Biology (McGill University), Department of Cell Biology (University of Groningen), Department of Gastroenterology and Hepatology (Erasmus Medical Center), and Serine Proteases and Pathophysiology of the Neurovascular (GIP Cyceron, Université de Caen Basse-Normandie).**

[99] D. Derakhshan, **M. Komeili**, A. S. Milani[c] (2015) "An analytical approach to the deflection analysis of woven preforms and composites under tensile loading using the Winkler theory of curved beams", Computational Materials Science, 96(B): 403–410

[100]**M. Alemi-Ardakani**, A. S. Milani[a], S. Yannacopoulos (2014) “On complexities of impact simulation of fiber reinforced polymer composites: A simplified modeling framework”, The Scientific World Journal, Volume 2014, Article ID 382525 (10 pages).

***Note*: The above publication was the result of an industrial-scale project and it has been recently recommended in PubAdvanced forums by senior industry researchers, including the Director of Biotronik (a biomedical technology company headquartered in Berlin, Germany).**

[101]**M. Nourani**, A. S. Milani[a], S. Yannacopoulos (2014) “A review on thermomechanical models of friction stir welding”, Advanced Materials Research, 922: 553-559 (also appeared in THERMEC'2013- The 8th International Conference on Processing & Manufacturing of Advanced Materials, December 2-6, 2013, Las Vegas, USA)

[102]**M. Shah Mohammadi, L. Solnickova**, **B. J. Crawford**, **M. Komeili**, A. S. Milani[a] (2014) “Investigating the unrecovered displacement of glass fibre reinforced polymers due to manufacturing conditions”, Journal of Multifunctional Composites, 2: 100–104

[103]**M. Nourani**, A. S. Milani[b], S. Yannacopoulos (25%) (2014) “On the effect of different material constitutive equations in modeling friction stir welding: a review and comparative study on aluminum 6061”, International Journal of Advances in Engineering & Technology, 7(1): 1-20

[104] **C. Lynam**, A. S. Milani[a], D. Trudel-Boucher, H. Borazghi (2014) “Predicting dimensional distortions in roll forming of comingled polypropylene/glass fiber thermoplastic composites: On the effect of matrix viscoelasticity”, Journal of Composite Materials, 48(28): 3539-3552

***Note:* This article was from an NSERC strategic project with collaborators from the Advanced Polymer Composites group of the Industrial Materials Institute-National Research Council (IMI-NRC) and AS Composite Inc.**

[105]**M. Nourani**, A. S. Milani[b], S. Yannacopoulos, C. Yan (2014) “An integrated multiphysics model for friction stir welding of 6061 Aluminum alloy", The International Journal of Multiphysics, 8(1): 29-48

[106]**A. Kasaei**, **A. Abedian**, A. S. Milani[b] (2014) “An application of quality function deployment method in engineering materials selection”, Materials and Design, 55: 912–920

[107]**D. Motamedi**, A. S. Milani[a], **M. Komeili**, M. N. Bureau, F. Thibault, D. Boucher (2014) “A Stochastic XFEM Model to Study Delamination in PPS/Glass UD Composites: Effect of Uncertain Fracture Properties”, Applied Composite Materials, 21(2): 341-358

***Note:* The above article was the result of a joint short-term project in collaboration of Advanced Polymer Composites group as well as Simulation of Deformable Materials Group at the Industrial Materials Institute-National Research Council Canada (IMI-NRC).**

[108] **D. Motamedi**, A. S. Milani[a] (2013) “3D nonlinear XFEM simulation of delamination in unidirectional composite laminates: a sensitivity analysis of modeling parameters”, Open Journal of Composite Materials, 3: 113-126

[109] **M. Nourani**, A. S. Milani[b], S. Yannacopoulos (2013) “Predicting residual stresses in friction stir welding of aluminum alloy 6061 using an integrated multiphysics model”, Materials Science Forum, 768-769: 682-689 (also appeared in the proceedings of the 9th International Conference on Residual Stresses, 7-9 October, 2012, Garmisch-Partenkirchen, Germany)

[110] **H. Rokni**, A. S. Milani[a], R. J. Seethaler, **M. Omidi** (2013) "Quantification of matrix and reinforcement effects on the Young's modulus of carbon nanotube/epoxy composites using a design of experiments approach', International Journal of Composite Materials, 3(6A): 45-57

[111] **M. Komeili**, A. S. Milani[a] (2013) "Shear response of woven fabric composites under meso-level uncertainties", Journal of Composite Materials, 47(19): 2331–2341

[112]**S. Pakpour**, **S. V. Olishevska**, S. O. Prasher, A. S. Milani[c], M. Chenier (2013) "DNA extraction method selection for agricultural soil using TOPSIS multiple criteria decision-making model", American Journal of Molecular Biology, 3: 215-228

[113]**M. Alemi-Ardakani**, A. S. Milani[a], S. Yannacopoulos, L. Bichler, G. Shokouhi, H. Borazghi, D. Trudel-Boucher (2013) "Microtomographic analysis of impact damage in FRP composite laminates: A comparative study", Special Issue on "Modeling, Characterization, and Processing of Advanced Composites", (Journal of) Advances in Materials Science and Engineering, Vol. 2013, Article ID 521860 (10 pages)

***Note*: The above research story was publicized by CHBC News on April 19, 2012.**

[114] R. T. Faal, **A. R. Pasrad**, A. S. Milani[c] (2013) "Anti-plane stress analysis of dissimilar sectors with multiple defects", Applied Mathematical Modelling, 37(1-2): 265–283

[115] **F. Alavi**, A. H. Behravesh, A. S.Milani[a], **D. Karimi** (2013) "On the effect of unit cell parameters in predicting the elastic response of wood plastic composites", Journal of Engineering, Article ID 456398 (7 pages)

[116] **H. Rokni**, R. Seethaler, A. S. Milani[c], S. Hosseini-Hashemi, X-F. Li (2013) "Analytical closed-form solutions for size-dependent static pull-in behavior in electrostatic micro-actuators via Fredholm integral method", Sensors and Actuators A: Physical,190: 32043

[117]A. S. Milani[a], A. Shanian, **C. Lynam,** T. Scarinci, (2013) "An application of the analytic network process in multiple criteria material selection", Materials and Design, 44: 622–632

***Note:* This article was a result of collaboration in an interdisciplinary project by researchers from the University of British Colombia, Harvard University, Rolls-Royce Canada, and Dr. Thomas L. Saaty from the University of Pittsburgh, who is a Distinguished Professor of the multi-criteria decision analysis and the inventor of the Analytic Hierarchy Process (AHP) as well as the Analytic Network Process (ANP).**

[118]**M. Nourani, A. S.** Milani[a], S. Yannacopoulos (2013) "On the experimental and numerical predictions of strain during friction stir welding: A case study on 7050 aluminum alloy", Transaction on Control and Mechanical Systems, 6(1): 259-263

[119] **M. Komeili**, A. S. Milani[a] (2013) [a] "An elaboration on the shear characterization of dry woven fabrics using trellising tests", Polymer Composites, 34(3): 359-367

[120]**N. Mehdizadeh**, C. Eskicioglu, A. S. Milani[c], **M. Saha** (2012) "Empirical modeling of the effects of emerging pretreatment methods on anaerobic digestion of pulp mill biosolids", Biochemical Engineering Journal, 68(15): 167–177

[121]**H. Rokni**, A. S. Milani[a], R. Seethaler, K. Stoeffler (2012) "Improvement in dynamic properties of laminated MWCNT-Polystyrene composite beams via an integrated numerical-experimental approach", Composite Structures, 94: 2538-2547

[122]**H. Hosseini-Nasab**, A. S. Milani[b] (2012) "An improvement of quantitative strategic planning matrix using multiple criteria decision making and fuzzy numbers", Applied Soft Computing, 12(8): 2246–2253

[123] **M. Komeili**, A. S. Milani[a] (2012) "The effect of meso-level uncertainties on the mechanical response of woven fabric composites under axial loading", Computers and Structures, 90-91: 163–171

[124] **S. Pakpour**, A. S. Milani[c], M. Chenier (2012) "A multi-criteria decision-making approach for comparing different sample preservation and DNA extraction methods from swine feces, American Journal of Molecular Biology, 2: 159-169

[125]**J. B. Torrez**, A. S. Milani[b], **D. D. C. Schuetze** (2012) "Material selection for a light-weight naval craft using the modified digital logic method: Dealing with ranking abnormalities", International Journal of Materials and Structural Integrity, Special Issue on Materials Selection and Design, 6: 241-256

[126] R. T. Faal, **M. B. Amiri**, A. A. Pirmohammadi, A. S. Milani[c] (2012) "Vibration analysis of undamped, suspended multi-beam absorber systems", Meccanica, 47(5): 1059-1078

[127] R. T. Faal, **A. R. Hassani**, A. S. Milani[c] (2012) "Stress analysis of transversely isotropic sectors weakened by multiple defects", International Journal of Solids and Structures, 49(26): 3627–3640

[128] A. Shanian, A. S. Milani[b], N. Vermaak, K. Bertoldi, T. Scarinci, M. Gerendas (2012) "A combined finite element-multiple criteria optimization approach for materials selection of gas turbine components", ASME Journal of Applied Mechanics, 79 (061019): 1-8

[129] **M. Komeili**, A. S. Milani[b], S. Tesfamariam (2012) "Performance based earthquake engineering design of reinforced concrete structures using black-box optimization", International Journal of Materials and Structural Integrity, 6(1): 1-25

[130] A. S. Milani[a], C. Eskicioglu, **K. Robles**, **K. Bujun**, **H. Hosseini-Nasab** (2011) "Multiple criteria decision making with life cycle assessment for material selection of composites", Express Polymer Letters, 5(12): 1062-1074

Note: **This article is from an intern-disciplinary project in summer 2010 supervised by faculty members from the Mechanical and Civil Engineering Programs at the School of Engineering. The extension of the work resulted in a strategic project grant, which was awarded in 2011.**

[131] **H. Rokni**, A. S. Milani[a], R. J. Seethaler (2012) "2D optimum distribution of carbon nanotubes to maximize fundamental natural frequency of polymer composite micro–beams", Composites Part B: Engineering, 43(2): 779–785

[132] **M. Modirzadeh**, S. Tesfamariam, A. S. Milani[c] (2012) "Performance based earthquake evaluation of reinforced concrete buildings using design of experiments", Expert Systems With Applications, 39(3): 2919–2926

[133] **H. Rokni**, R. J. Seethaler, A. S. Milani[c] (2011) "An optimum flexible linkage design of a fully variable electromechanical valve actuation system for internal combustion engines ", ASME[1] Mechanical Design, 133(121008): 1-9

[1] American Society of Mechanical Engineers.

[134] **D. Motamedi**, A. S. Milani[a] (2011) “Improving damage resistance of a composite pole using a computer experiment strategy”, ICE Engineering and Computational Mechanics, 164 (EM3): 171-181

[135] **H. Rajput**, A. S. Milani[b], A. Labun (2011) “Time dependency and ANOVA in decision making process using the revised fuzzy AHP: A case study on wafer slicing machine selection”, Applied Soft Computing, 11: 5099–5109

[136] **M. Nourani**, **S. V. Sajadifar**, M.Ketabchi, A. S. Milani[c], S. Yannacopoulos (2011), “On the microstructural evolution of 4130 steel during hot compression”, Recent Patents on Materials Science, 5(1), 74-83; **Continually listed among the most downloaded articles of the Journal).**

[137] **H. Rokni**, A. S. Milani[a], R. Seethaler (2011) “Maximum natural frequencies of polymer composite microbeams by optimum distribution of carbon nanotubes”, Materials and Design, 32(6): 3389-3398

[138] **M. Nourani**, A. S. Milani[a], S. Yannacopoulos (2011) “Taguchi optimization of process parameters in friction stir welding of 6061 aluminum alloy: a review and case study”, Engineering, 3(2): 144-155

[139] R. T. Faal, **M. Daliri**, A. S. Milani[c] (2011) “Anti-plane stress analysis of orthotropic rectangular planes weakened by multiple defects”, International Journal of Solids and Structures, 48: 661–672

[140] **H. Hosseini-Nasab**, **A. Hosseini-Nasab**, A. S. Milani[b] (2011) “Coping with imprecision in strategic planning: a case study using fuzzy SWOT analysis”, iBusiness, 3(1): 23-29

[141] **M. Omidi**, **H. Rokni**, A. S. Milani[c], R. J. Seethaler, M. Arasteh (2010) “Prediction of the mechanical characteristics of multi-walled carbon nanotube/epoxy composites using a new form of the rule of mixtures”, Carbon, 48(11): 3218-3228

[142] **M. Mahmoudi**, A. Simchi, M. Imani, M. A. Shokrgozar, A. S. Milani[c], U. O. Häfelif, P. Stroeve (2010) “A new approach for the in vitro identification of the cytotoxicity of superparamagnetic iron oxide nanoparticles”, Colloids and Surfaces B: Biointerfaces, 75(1): 300-309 **(listed by ScienceDirect.com among the Top 25 Hottest Articles of the journal during 2009-2010 academic year)**

[143] **M. Mahmoudi**, A. S. Milani[c], P. Stroeve (2010) "Surface architecture of superparamagnetic iron oxide nanoparticles for application in drug delivery and their biological response: A review", Special Issue on Advancing Drug Delivery Systems with Nanotechnology, International Journal of Biomedical Nanoscience and Nanotechnology, 1(2-4): 164-201

[144] A. S. Milani[a], J. A. Nemes, G. Lebrun, M.N. Bureau (2010) “A comparative analysis of a modified picture frame test for characterization of woven fabrics”, Polymer Composites, 31(4): 561-568

[145] A. S. Milani[a], **H. Wang**, D. D. Frey, R. C. Abeyaratne (2009) “Evaluating three DOE methodologies: Optimization of a composite laminate under fabrication error”, Quality Engineering, 21(1): 96-110

[146] A. S. Milani[a], **W. Dabboussi**, J. A. Nemes, R. C. Abeyaratne (2009) “An improved multi-objective identification of Johnson-Cook material parameters”, International Journal of Impact Engineering, 36(2): 294-302

[147] **S. Amine**, A. S. Milani[c], J. A. Nemes (2009) "Identification of a computationally efficient numerical model for honeycombs using a multiobjective Taguchi optimization process", International Journal of Modeling and Simulation, 29 (2): 169-180

[148] **M. Mahmoudi**, M. A. Shokrgozar, A. Simchi, M. Imani, A. S. Milani[b], P. Stroeve, H. Vali, U.O. Hafeli, **S. Bonakdar** (2009) "Multiphysics flow modeling and in vitro toxicity of iron oxide nanoparticles coated with polyvinyl alcohol", The Journal of Physical Chemistry C, 113 (6): 2322-2331

[149] **M. Mahmoudi**, A. Simchi, M. Imani, A. S Milani[c], P. Stroeve (2009) "In vitro study of bare and poly (ethylene glycol)-co-fumarate coated superparamagnetic iron oxide nanoparticles: A new toxicity identification procedure", Nanotechnology, 20 (2009) 225104 (8pp)

[150] **M. Mahmoudi**, A. Simchi, A. S. Milani[c], P. Stroeve (2009) "Cell toxicity of superparamagnetic iron oxide nanoparticles", Journal of Colloid & Interface Science, 336: 510–518 **(listed by ScienceDirect.com among the Top 25 Hottest Articles of the journal during 2009-2010 academic year)**

[151] **M. Mahmoudi**, A. Simchi, M. Imani, A. S. Milani[c], P. Stroeve (2008, invited paper) "Optimal design and characterization of superparamagnetic iron oxide nanoparticles for targeted delivery and imaging", The Journal of Physical Chemistry B, Special Issue: Janos H. Fendler Memorial,112(46): 14470-14481 (**listed among the journal's top 20 most downloaded articles in 2008**)

[152] A. Shanian, A. S. Milani[b], C. Carson, R. C. Abeyaratne (2008) "A new application of ELECTRE III and revised Simos' procedure for group material selection under weighting uncertainty", Knowledge-Based Systems, 21(7): 709-720

[153] A. S. Milani[b], A. Shanian (2008) "A decision-based approach for measuring human behavioral resistance to organizational change in strategic planning", Mathematical and Computer Modeling, 48(11-12): 1765-1774

[154] A. S. Milani[a], J. A. Nemes, R. C. Abeyaratne, G. A. Holzapfel (2007) "A method for the approximation of non-uniform fiber misalignment in textile composites using picture frame test", Composites Part A: Applied Science and Manufacturing, 38:1493-1501

[155] A. S. Milani[b], A. Shanian (2006) "Gear material selection with uncertain and incomplete data. Material performance indices and decision aid model", International Journal of Mechanics and Materials in Design, 3:209–222

[156] A. S. Milani[b], A. Shanian, **C. El-Lahham** (2006) "Using different ELECTRE methods in strategic planning in the presence of human behavioral resistance", Journal of Applied Mathematics and Decision Sciences, Volume 2006, Article ID 10936 (19 pages)

[157] A. S. Milani[b], A. Shanian, R. Madoliat, J. A. Nemes (2005) "The effect of normalization norms in multiple attribute decision making (MADM) models: A case study in gear material selection", Structural and Multidisciplinary Optimization, 29(4): 312-318

[158] **C. El-Lahham**, A. S. Milani[c], J. A. Nemes, N. Nickoletopolous, M. Hone (2005) "Optimization of cold heading preform dies using FEM analysis and a multi-criteria Taguchi approach", Wire Journal International, Paper ID TR-TS007

[159] A. S. Milani[a], J. A. Nemes (2004) “An intelligent inverse method for characterization of textile reinforced thermoplastic composites using a hyperelastic constitutive model”, Composites Science and Technology, 64: 1565-1576

[160] A. S. Milani[b], **C. El-Lahham**, J. A. Nemes (2004) “Different approaches in multiple-criteria optimization using the Taguchi Method: A case study in a cold heading process”, Journal of Advanced Manufacturing Systems, 3 (1): 53-68

[161] A. S. Milani[b], J. A. Nemes (2004) “On identification of material models when non-repeatability of test data is present: Application to textile composites”, ASME Journal of Engineering Materials and Technology, 126 (4): 443-449

(b) Conference Proceedings

[162] **A. Chakraborty**, **A. V. N. Pillai**, Abbas S. Milani[c], Apurva Narayan (2022) “Improving imbalanced dataset classification using conditional classifier-generator (cCGen)”, Proceedings of IEEE International Conference on Systems, Man, and Cybernetics (SMC), October 9-12, Prague, Czech Republic

[163] **M. Olivia**, A. S. Milani[a] (2022) “Mechanical and thermal characterization of a flax fibre reinforced biobased high-density polyethylene composite”, 12th Canadian-International Conference on Composites (CANCOM22), July 12-15, Fredericton-Moncton, Canada (**awarded 2nd place in the Professor Suong V. Hoa Student Paper Award Competition**)

[164] **E. Ebrahimnia-Bajestan**, M. Gharibnavaz, M. Jin, R. Li, J. Brinkerhoff, Abbas S. Milani[c] (2022) “CFD simulation of condensation heat transfer in mini/micro-channels—application in waste heat recovery”, Proceedings of the Canadian Society for Mechanical Engineering International Congress, June 5-8, Edmonton, Canada

[165] **F. Gholamreza**, C. Hammond, R. Gathercole, P. Dolez, K. Golovin, S.R. Li, A. S. Milani[a] (2022) “A novel protocol to determine sweat-induced skin wetness thresholds and fabrics moisture management properties”, The Fiber Society's spring 2022 Conference, May 30- June 1, Leuven, Belgium

[166] **M. Ramezankhani**, **A. Nazemi**, A. Narayan, H. Voggenreiter, M. Harandi, R. Seethaler, A. S. Milani[a] (2022) “A data-driven multi-fidelity physics-informed learning framework for smart manufacturing: A composites processing case study”, The 5th IEEE International Conference on Industrial Cyber-Physical Systems (ICPS), 22-24 May, Hosted online by University of Warwick in Coventry, United Kingdom

[167] **M. Jahandardoost**, D. Grecov, D. Ricci, A. S. Milani[c], Y. Hsiang (2022) “Development of a new generation of neurovascular devices for the treatment of cerebral bifurcation aneurysms with the fusiform opathology: a computational approach”, Design of Medical Devices Conference, April 11-14, Minneapolis, USA

[168] **M. Khajezade**, **M. Ramezankhani**, F. H. Fard, M. S. Shehata, A. S. Milani[c] (2021) “Toward using few-shot learning for prediction of complex in-service defects of composite products: A case study”, The Annual IEEE Canadian Conference of Electrical and Computer Engineering, September 12-17, Virtual Event

[169] **F. Gholamreza**, K. Golovin, A. S. Milani[c], **A, Pillai** (2021) “Thermophysiological assessment of face masks”, The 8th International Conference on Intelligent Textiles and Mass Customization-ITMC, September 20-22, Montreal, Canada

[170] **M. Ramezankhani**, A. Narayan, R. Seethaler, A. S. Milani[a] (2021) “An active transfer learning (ATL) framework for smart manufacturing with limited data: case study on material transfer in

composites processing", The 4th IEEE International Conference on Industrial Cyber-Physical Systems (ICPS), May 10-13, Victoria, Canada

[171] **H. Montazerian**, **R. Sourki**, **M. Ramezankhani**, **A. Rashidi**, M. Koerber, A. S. Milani[a] (2019) "Digital twining of an automated fabric draping process for industry 4.0 applications: Part I- multi-body simulation and finite element modeling", CAMX – The Composites and Advanced Materials Expo, 23-26 September, Anaheim, USA

[172] **K. Dhir**, **B. Crawford**, **A. Rashidi,** G. Bogyo, R. Ryde, A. S. Milani[a] (2019) "Investigating plastination feasibility of natural fibres for improved durability", 11th Canadian-International Conference on Composites (CANCOM19), July 22-25, Kelowna, Canada

[173] **A. Rashidi**, **B. Crawford,** A. S. Milani[a] (2019) "A mixed lubrication model for inter-ply friction behavior of thermoset prepregs", 11th Canadian-International Conference on Composites (CANCOM19), July 22-25, Kelowna, Canada (won the conference second best student paper award)

[174] **C. Keegan**, **B. Khatir**, **M.A.R. Khandoker**, K. Golovin, A. S. Milani[a] (2019) "On the development of self-sensing textile preforms using fused deposition modelling: A preliminary investigation of process parameters", 11th Canadian-International Conference on Composites (CANCOM19), July 22-25, Kelowna, Canada

[175] **T. Olfatbakhsh**, A. S. Milani[a] (2019) "Nondestructive testing integrated with data-driven metamoldeing to predict microstructure-property relations in woven fabrics", 11th Canadian-International Conference on Composites (CANCOM19), July 22-25, Kelowna, Canada

[176] **S. Nezafatkhah**, **A. Rashidi**, **B. Crawford**, F. Sassani, A. S. Milani[a] (2019) "Understanding the natural aging of GFRP composites: A longitudinal study", 11th Canadian-International Conference on Composites (CANCOM19), July 22-25, Kelowna, Canada (nominated for the best student paper award)

[177] **R. Sourki**, **R. Faal**, **B. Crawford**, R. Vaziri, A. S. Milani[a] (2019) "Fractional viscoelastic behavior of prepreg woven fabrics", 11th Canadian-International Conference on Composites (CANCOM19), July 22-25, Kelowna, Canada

[178] **A. Rashidi**, **C. Keegan**, A. S. Milani[a] (2019) "Analysis of inter-ply friction in consolidation process of thermoset woven prepregs", ESAFORM 2019: 22nd International Conference on Material Forming, May 8-10, Vitoria-Gasteiz, Spain

[179] **R. Sourki**, A. S. Milani[a], R. Vaziri (2019) "Towards understanding and modeling irreversible behavior of woven fabrics under loading-unloading bending regimes", 22nd International Conference on Composite Materials (ICCM22), August 11-16, Melbourne, Australia

[180] **D. Karimi**, **B. Crawford**, A S. Milani[a] (2018) "Manufacture and property determination of green stone
composite", 4th International Conference on Production Automation and Mechanical Engineering, 3-4 August, Montreal, Canada

[181] **H. Montazerian**, A. S. Milani[b], M. Hoorfar (2018) "Piezoresistive chopped carbon fiber/ polydimethylsiloxane composite yarns for deformation sensing in textile fabrics", Proceedings of The Canadian Society for Mechanical Engineering (CSME) International Congress, May 27-30, Toronto, Canada

[182] **M. Haghi Kashani**, **M. Hejazi**, **A. Hosseini**, F. Sasani, F.K. Ko, A.S. Milani[a] (2017) "Toward enhanced forming simulation of woven fabrics using a coupled non-orthogonal hypoelastic constitutive model, integrated with a new wrinkling onset criterion", 32nd ASC Technical

Conference, October 23–25, West Lafayette, USA (**The student team in the project won the Travel Scholarship and Code Competition Award**).

[183] **G. Golkarnarenji**, H. Khayyam, K. Badii, A. S. Milani[c], R. Jazar (2017) "Complex system modelling through support vector regression with limited data", IEEE First International Conference on Computational and Mathematical Methods in Engineering & Technology (iCOMET'17), December 18-20, Melbourne, Australia

[184] **M. Ramezankhani**, **B. Crawford**, H. Khayyam, M. Naebe, R. Seethaler, A.S. Milani[a] (2017) "A multi-objective Gaussian process approach for robust optimization and prediction of carbonization process", 20th International Conference on Composite Structures (ICCS20), September 4-7, Paris, France

[185] **J. Torres**, L. Bichler, D. Frey, A.S. Milani[a] (2017) "A signal-to-noise TOPSIS approach for quality enhancement in composites manufacturing", 20th International Conference on Composite Structures (ICCS20), September 4-7, Paris, France

[186] **A. Rashidi**, A. S. Milani[a] (2017) "A hybrid kinematic-based model (HYKE-I) for predicting forming-induced defects of woven composites", Canadian - International Conference on Composites (CANCOM17), July 17-20, Ottawa, Canada

[187] **R. Vahed**, **H.R. Zareie Rajani,** A. S. Milani[a] (2017) "The effects of fused deposition modeling process parameters on the complex modulus of 3d printed ABS", Canadian - International Conference on Composites (CANCOM17), July 17-20, Ottawa, Canada

[188] A.S. Milani[a], D. Frey, R. Seethaler, J. Ramkumar, **B. Crawford**, **H. Teimouri**, **F. Islam**, **P. Pal** (2016) "A roadmap to account for potential uncertainties in non-destructive testing during structural health monitoring of composites", 31st ASC Technical Conference and ASTM D30 Meeting, September 19-22, Williamsburg, USA

[189] **B. Crawford**, **J. Torres**, A. S. Milani[a] (2016) "Modeling and optimising the de-moulding process of an industrial-size fibre-glass reinforced polymer component to minimise corner cracking", Canadian Society for Mechanical Engineering International Congress, June 26-29, Kelowna, Canada

[190] **A. Rashidi**, A. S. Milani[a] (2016) "Finite element analysis of a composite landing gear and effect of runway material", Canadian Society for Mechanical Engineering International Congress, June 26-29, Kelowna, Canada

[191] **A. Rashidi**, A.S. Milani[a] (2016) "Characterization of wrinkling and de-wrinkling behaviour of woven fabrics using a multi-step biaxial bias extension test", 17th European Conference on Composite Materials, 26-30 June, Munich, Germany

[192] **B. Crawford**, A. S. Milani[a] (2015) "Toward development of a lower-risk GFRP tool lifecycle management workflow, for the effective control of surface finish", Composites and Advanced Materials Expo (CAMX) Conference, October 26-29, Dallas, USA

[193] **H. Teimouri**, A. S. Milani[a], R. Seethaler, J. Loeppky (2015) "A comparison of different statistical approaches to strain-based structural health monitoring under uncertainty", The 5th International Conference on Smart Materials and Nanotechnology in Engineering, 15-17 July, 2015 - Vancouver, Canada

[194] **M. Haghi Kashani**, A. S. Milani[a] (2015) “Understanding the effect of in-plane fiber waviness on damage behavior of cured woven composites”, 20th International Conference on Composite Materials (ICCM20), July 19-24, Copenhagen, Denmark

[195] **M. Heinrick**, **B. Crawford**, A. S. Milani[a] (2015) “Degradation of fibreglass composites under natural weathering conditions”, Canadian - International Conference on Composites (CANCOM15), August 18 – 20, Edmonton, Canada

[196] **Y. Mosaferi**, **B. Crawford**, **J. Torres**, A. S. Milani[a] (2015) “On static and dynamic friction characterization of tool-fiber interaction: effect of mould type and processing conditions”, Canadian - International Conference on Composites (CANCOM15), August 18 – 20, Edmonton, Canada (**selected by a panel of independent judges as one of the five finalists for the Professor Suong V. Hoa Student Paper Award Competition**)

[197] **A. Olson**, **B. Crawford**, A. S. Milani[a] (2015) “Characterization of thermal conductivity and tool-part thermal resistance in composite processing”, Canadian - International Conference on Composites (CANCOM15), August 18 – 20, Edmonton, Canada

[198] **M. Haghi Kashani**, A. S. Milani[a] (2015) “Understanding new damage mechanisms in woven composites: the effect of surface quality”, Canadian - International Conference on Composites (CANCOM15), August 18 – 20, Edmonton, Canada

[199] **N. Kazemian**, **S. Pakpour**, **B. Crawford**, J. Klironomos, A. S. Milani[a] (2015) “The effect of biodeterioration on mechanical properties of hemp natural fiber reinforced composite”, Canadian - International Conference on Composites (CANCOM15), August 18 – 20, Edmonton, Canada

[200] **M. Komeili**, A. S. Milani[a] (2014), “Current challenges toward accurate forming simulation of woven fabric composite reinforcements: roadmap for a probabilistic-based design”, The 10th Canada-Japan Workshop on Composites, Vancouver, 19-21 August, Vancouver, Canada

[201] **J. Torres**, **B. Crawford**, **F. Islam**, L. Bichler, A.S. Milani[a] (2014) “The effect of design parameters on the quality of open molded fiber reinforced composites with sharp corners”, SAMPE Conference, 2-5 June, Seattle, USA

[202] **M. Nourani**, A. S. Milani[a], S. Yannacopoulos, “A review on thermomechanical models of friction stir welding”, THERMEC'2013- The 8th International Conference on Processing & Manufacturing of Advanced Materials, December 2-6, 2013, Las Vegas, USA

[203] **D. D. C. Schuetze**, K. Gordnian, A. S. Milani[a], A. Poursartip, R. Vaziri, H. Borazghi (2013), “Predicting the temperature profile in the roll forming of a commingled glass-PP woven composite”, SAMPE 2013 Conference, 6-9 May, Long Beach, USA

[204] **J. Leung**, **M. Heinrick**, A.S. Milani[a] (2013) ”Comparison of consolidated composites using mechanical testing and a multi-criteria decision making technique under variable material properties”, 19th International Conference on Composite Materials (ICCM19), July 28- August 2, Montreal, Canada

[205] **H. Teimouri**, A. S. Milani[a], R. Seethaler (2013) ”Towards strain-based structural health monitoring of a composite airfoil under uncertainty”, 19th International Conference on Composite Materials (ICCM19), July 28- August 2, Montreal, Canada

[206] **D. Motamedi** , A. S. Milani[a] (2013) “Mixed-mode fracture analysis of delamination using non-linear extended finite element method”, 19th International Conference on Composite Materials (ICCM19), July 28- August 2, Montreal, Canada

[207] **M. Shah Mohammadi, L. Solnickova**, **B. J. Crawford**, **M. Komeili**, A. S. Milani[a] (2013) “A case study on dimensional change of glass fibre reinforced polymers after demoulding: A combined effect of cure progression and thermo-viscoelastic behaviour”, 19th International Conference on Composite Materials (ICCM19), July 28- August 2, Montreal, Canada

[208] **S. Rakhshani**, A. Rteil, **M. Komeili**, A. S. Milani[b] (2013) “Effect of TRM on the flexural performance of RC beams”, 19th International Conference on Composite Materials (ICCM19), July 28- August 2, Montreal, Canada

[209] **M. Komeili**, A. S. Milani[a] (2013) “Solid mechanics-based simulation of composite forming with stress relaxation in the dry fabric reinforcement and resin curing”, 19th International Conference on Composite Materials (ICCM19), July 28- August 2, Montreal, Canada

[210] **M. Komeili**, A. S. Milani[a] (2013) “Response surfaces of mechanical behavior of dry woven fabrics under combined loadings”, 19th International Conference on Composite Materials (ICCM19), July 28- August 2, Montreal, Canada

[211] **M. Nourani**, A. S. Milani[b], S. Yannacopoulos (2012) “Predicting residual stresses in friction stir welding of aluminum alloy 6061 using an integrated multiphysics model”, 9th International Conference on Residual Stresses, 7-9 October, 2012, Garmisch-Partenkirchen, Germany

[212] **M. Nourani**, A. S. Milani[b], S. Yannacopoulos, C. Yan (2012) “Predicting grain size distribution in friction stir welded 6061 aluminum”, The 9th International Symposium on Friction Stir Welding 15-17 May, Huntsville, USA.

[213] **S. H. Tahseen**, A. S. Milani[c], M. Hoorfar (2012) “Sensitivity analysis of mass transport properties of gas diffusion layers of polymer electrolyte membrane fuel cells”, 10th International Conference on Nanochannels, Microchannels, and Minichannels, July 8-12, Puerto Rico, USA

[214] **M. Komeili**, A. S. Milani[a] (2012) “Selection of woven fabric composites using a multi-criteria decision making technique and meso-level finite element simulation”, 15th European Conference on Composite Materials, 24 - 28 June, Venice, Italy

[215] **M. Komeili**, A. S. Milani[a] (2012) “Inverse identification of meso-level material properties in woven fabrics using multi-objective optimization”, 15th European Conference on Composite Materials, 24 - 28 June, Venice, Italy

[216] **A. Mosavi**, A.S. Milani[b], M. Hoffmann, **M. Komeili** (2012) “Multiple criteria decision making integrated with mechanical modeling of draping for material selection of textile composites”, 15th European Conference on Composite Materials, 24 - 28 June, Venice, Italy

[217] **A. Mosavi**, M Hoffmann, A.S. Milani[c] (2012) “Optimal design of the NURBS curves and surfaces utilizing multiobjective optimization and decision making algorithms of RSO”, The 2nd Conference of PhD Students in Mathematics, University of Debrecen, Faculty of Informatics, June 28 - June 30, Szeged, Hungary

[218] **F. Alavi**, A. Behravesh, **D. Karimi**, A. S. Milani[a] (2011) “On the effect of unit cell parameters in predicting the elastic response of wood particulate-polymer composites”, Polymer Processing Society, 2011 Asia/Australia Regional Meeting, November 15-17, Kish Island, Iran

[219] **A. Mosavi**, **M. Azodinia**, A. S. Milani[b], K. N. Hewage, M. Yeheyis (2011) “Reconsidering the multiple criteria decision making problems of construction workers with the aid of grapheur," International ANSYS and EnginSoft Conference, 20-21 October, Verona, Italy

[220] **F. Alavi**, A. Behravesh, A. S. Milani[c] (2011) “Determining fracture toughness of a wood plastic composite as a cohesive zone parameter”, Polymer Processing Society, 2011 Asia/Australia Regional Meeting, November 15-17, Kish Island, Iran

[221] **K. Gordnian**, A. S. Milani[c], A. Poursartip (2011) “Experimental investigation of effects of crystallinty on viscoelastic properties of glass fibre reinforced polypropylene”, The 26th ASC (American Society for Composites) Annual Technical Conference: the Second Joint US-Canada Conference on Composites, Montreal, Canada

[222] **M. Komeili**, A. S. Milani[a] (2011) “A comparison of implicit and explicit finite element methods for the meso-level simulation of dry woven fabric composites”, The 18th International Conference on Composite Materials/ ICCM, Jeju Island, Korea

[223] **C. Lynam**, A. S. Milani[a], D. T. Boucher, H. Borazghi (2011) “Predicting thermal deformations during the roll forming of thermoplastic matrix composites”, Society for the Advancement of Material and Process Engineering/SAMPE, Technical Conference on State of the Industry: Advanced Materials, Applications, and Processing Technology, Long Beach, USA

Note: **This article emerged from an NSERC Strategic Project with collaborators from the Industrial Materials Institute-National Research Council (IMI-NRC) as well as AS Composite Inc.**

[224] **M. Nourani**, A. S. Milani[a], S. Yannacopoulos (2011) “A new approach to measure strain during friction stir welding using visioplasticity”, ASME International Mechanical Engineering Congress & Exposition, Denver, USA

[225] **M. Alemi-Ardakani**, A. S. Milani[a], S. Yannacopoulos, D. Trudel-Boucher, G. Shokouhi (2011) “Flexural toughness as an attribute for impact damage evaluation of composite laminates”, ASME International Mechanical Engineering Congress & Exposition, Denver, USA

[226] **M. A. Murran**, A. S. Milani[c], H. Najjaran (2011) ”Capacitance-based droplet position sensing optimization through digital microfluidic parameters”, ASME International Conference on Nanochannels, Microchannels, and Minichannels/ICNMM, Edmonton, Canada

[227] **H. M. Banna**, A. K. M. Sadrul Islam, A. S. Milani[c], M. Hoorfar (2011) ”Analysis of energy and exergy for mixed convection flow in microstructure filled vented enclosures”, ASME International Conference on Nanochannels, Microchannels, and Minichannels/ICNMM, Edmonton, Canada

[228]**S. N. Mehdizadeh**, C. Eskicioglu, A. S. Milani[c], **M. Saha** (2011) “Empirical modeling for effects of emerging pretreatment methods on anaerobic digestion of pulp mill biosolids”, WEF Energy and Water Conference, Chicago, Illinois (20 pages)

[229]**C. Lynam**, A. S. Milani[a] (2010) “A viscoelastic based mechanism for improving spring-in angle prediction in compression molded thermoplastic matrix composites”, ASME International Design Engineering Technical Conference, IDETC/CIE, Montreal, Quebec, Canada

[230] **M. Alemi-Ardakani**, A. Afaghi-Khatibi, A. S. Milani[c], **H. Parsaiyan** (2010) “Low-velocity impact behavior of aluminum-fiber/epoxy laminates: A comprehensive experimental study”, ASME International Design Engineering Technical Conference, IDETC/CIE, Montreal, Quebec, Canada

[231] **H. Rokni**, A. S. Milani[a], R. J. Seethaler, J. Holzman (2010) "The effect of carbon nanotubes on the natural frequencies of microcantilever beams", ASME International Design Engineering Technical Conference, IDETC/CIE, Montreal, Quebec, Canada

[232] **M. Nourani**, **H. Aliverdilu**, H. Monajati Zadeh, H. Khorsand, A. Shokuhfar, A. S. Milani[c] (2010) "A study on the formability of IF and plain carbon mild steels", ASME International Design Engineering Technical Conference, IDETC/CIE, Montreal, Quebec, Canada

[233] **D. D. C. Schuetze**, A. S. Milani[a], Y. Cao, H. Najjaran (2010) "An integrated approach in design, control and optimization of vibration systems", The 51st AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Orlando, Florida, USA (8 pages) (**the first author, a graduate student at UBC, received the best student presentation award in the corresponding technical session of the conference**)

[234] **F. Sadi**, R. Klukas, A. S. Milani[c] (2010) "A network selection and optimization approach for ground-based positioning systems", Proceeding of the Institute of Navigation GNSS Conference, Portland, Oregon, USA

[235] **M. Komeili**, A. S. Milani[a] (2009) "On the effect of uncertainty factors on mechanical behavior of woven fabric composites at meso-level", ASME International Mechanical Engineering Congress & Exposition, Lake Buena Vista, USA

[236] **C.-S. Liao**, A. Labun, A. S. Milani[a] (2009) "A rapid method to compute the temperature distribution in non-crimp fabric composites", The 17th International Conference on Composite Materials, Edinburgh, UK

[237] **C.-S. Liao**, A. Labun, A.S. Milani[c] (2009) "On the speed of symbolic network analysis of joule heating in IC interconnects", Proceedings of the 2nd Microsystems and Nanoelectronics Research Conference (MNRC), In conjunction with the CMC Microsystems Annual Symposium, Ottawa, Ontario, Canada

[238] **T. Vandervelde**, A. S. Milani[a] (2009) "Layout optimization of a multi-zoned, multi-layered composite wing under free vibration", 16th SPIE Annual International Symposium on Smart Structures/NDE, San Diego, USA

[239] **M. Mahmoudi**, A. Simchi, A. S. Milani[c], P. Stroeve (2008) "Surface engineering of iron oxide nanoparticle for drug delivery: Some preliminary results", The 2nd Conference on Nanostructures, Kish Island, Iran

[240] A. S. Milani[a], A. Shanian, R. C. Abeyaratne (2007) "A group decision-making approach in multi-criteria material selection", The 18th IASTED Conference on Modeling &Simulation, Montreal, Canada

[241] A. S. Milani[a], R. C. Abeyaratne (2006) "An approximation of the effective length of woven fabrics in bias-extension test specimens", The 8th International Conference on Textile Composites, Nottingham, UK

[242] A. S. Milani[b], **W. Dabboussi**, C. El-Lahham, J. A. Nemes, R. C. Abeyaratne (2006) "On obtaining material parameters for general purpose finite element models", The 17th IASTED International Conference on Modeling & Simulation, Montreal, Canada

[243] A. S. Milani[b], J. A. Nemes (2004) “On effect of material parameters used in numerical simulation of forming processes”, The 8th International Conference on Numerical Methods in Industrial Forming Processes (NUMIFORM), Ohio, USA

Note: The above paper was directly from my PhD work; Prof. J. A. Nemes was my supervisor.

[244] A. S. Milani[b], **C. El-Lahham**, J. A. Nemes (2004) “A crisp solution in multi-criteria optimization using Taguchi method: Application to a cold heading process”, The 8th International Conference on Numerical Methods in Industrial Forming Processes (NUMIFORM), Ohio, USA (6 pages)

[245] A. S. Milani[a], J. A. Nemes, X-T. Pham, G. Lebrun (2003) “The effect of fiber misalignment on parameter determination using picture frame test”, 14th International Conference on Composite Materials, San Diego, USA (10 pages) (later on published as a Technical Paper, #TP03PUB236, by the Society of Manufacturing Engineering/SME)

Note: The above paper was directly from my PhD work; Prof. J. A. Nemes was my supervisor and the work was supported by the Industrial Materials Institute-National Research Council (IMI-NRC).

[246] **El-Lahham**, A. S. Milani[c], J. A. Nemes (2003) “Optimization of preform dies using a multi-criteria Taguchi approach and finite element analysis”, The 5th International Industrial Engineering Conference, Quebec City, Canada

[247] A. Shanian, A. S. Milani[b], M. Aryanejad, R. Madoliat (2000) “Using multiple criteria decision making models in mechanical component optimization and its application in optimizing a typical gear of a gearbox”, 2nd International Applied Mathematics Conference, Tehran, Iran

[248] M. Meigunpoori, A. S. Milani[c], R. T. Faal (2000) "Selection of optimum gear ratio of overdrive for 5-speed gearboxes", 2nd Provincial Conference in Mechanical Engineering, Semnan University, Semnan, Iran

[249] R. T. Faal, A. S. Milani[c], R. Madoliat (1998) "A new technique for balancing dynamic forces in a known mechanism", 3rd International Mechanical Engineering Conference, Tehran, Iran

[250] A. S. Milani[a], R. T. Faal, R. Madoliat, H. Farokhnia (1998) "Assessment of the effects of reflected moment of inertia on performance of 5th gear of a manual gearbox", 3rd International Mechanical Engineering Conference, Tehran, Iran

(c) Other (abstract/poster)

[251] **N. Akbarian-Saravi**, A. S. Milani[b], T. Sowlati (2022) “A techno-economic environmental investigation of hemp-based biocomposite supply chain: case study in western Canada”, Energy, Natural Resources, and the Environment Cluster, CORS/INFORMS International Conference, 5th June, Vancouver, Canada.

[252] **N. Akbarian-Saravi**, A. S. Milani[b], T. Sowlati (2022) “Developing a sustainable biocomposite supply chain assessment model under uncertainty: a case study in western Canada”, CORS - Forestry SIG Cluster, CORS/INFORMS International Conference, 7th June, Vancouver, Canada.

[253] **T. Olfatbakhsh**, A.S. Milani[a] (2021) “Reduced-order structure-property linkage for woven fabric laminates with an efficient Materials Informatics technology”, Boeing Lunchtime Seminar Series, May 2022, CRN

[254] **P. Reekie**, **D. Gündüz**, S. Chau, A. S. Milani[c] (2022) "The 'Personal Belongings Carrier' (PBC) and its effect on vulnerable communities", UBC Multidisciplinary Undergraduate Research Conference (MURC), 19-20March, Vancouver, Canada

[255] **P. Reekie**, **D. Gündüz**, S. Chau, A. S. Milani[c] (2022) "The 'Personal Belongings Carrier' (PBC) and its effect on vulnerable communities", UBC Okanagan Interdisciplinary Student Health Conference, 10th March, Kelowna, Canada

[256] **V. Loa**, **J. Jang**, **R. J. Krishnamurthy**, **I. Jalivand**, M. K. Hasan, A. S. Milani[c] (2022) "A mixed reality guidance tool for medical training", UBC Multidisciplinary Undergraduate Research Conference (MURC), 19-20 March, Vancouver, Canada

[257] **V. Loa**, **J. Jang**, **R. J. Krishnamurthy**, **I. Jalivand**, M. K. Hasan, A. S. Milani[c] (2022) "A mixed reality guidance tool for medical training", UBC Okanagan Interdisciplinary Student Health Conference, 10th March, Kelowna, Canada

[258] **M. Ramezankhani**, A.S. Milani[a] (2021) "Transfer learning application for data-driven prediction and optimization of advanced manufacturing processes with limited data", Boeing Lunchtime Seminar Series, December 2021, CRN

[259] D. Garland, **O. Margoto**, **F. Nordmark**, M. Chavero, A. Milani (2021) "Hurricane resilient solar energy", SPI, ESI, and Smart Energy Week 2021, 20-23 September, New Orleans, USA

[260] **M. Ramezankhani**, **T. Olfatbakhsh,** A. Akbar Ashkarran, D. Abou Zeki, I. Radu, M. Joyner, F. Khalighinejad, K. Keihanian, A. S. Milani[c], K. Afshari, J. M. Richmond, C. Ionete, M. Mahmoudi, S. Pakpour (2021) "Discrimination of multiple sclerosis disease types using magnetic levitation and vision intelligence", Annual Biology Graduate Symposium, May 2021, UBC Okanagan

[261]**T. Olfatbakhsh**, A.S. Milani[a] (2021) "A highly interpretable materials informatics approach for predicting microstructure-property relationship in fabric composites", Boeing Lunchtime Seminar Series, April 2021, CRN

[262] **A. Rashidi**, A.S. Milani[a] (2021) "Consolidation-driven wrinkling of fabric prepregs", Boeing Lunchtime Seminar Series, September 2020, CRN

[263] **S. Kazemi**, A.S. Milani[a] (2020) "Toward the 4th industrial revolution of oil and gas upstream", GeoConvection2020, Calgary, Canada

[264] **M. Ramezankhani**, A.S. Milani[a] (2020) "Transfer learning application for data-driven prediction and optimization of advanced manufacturing processes, with limited data", Boeing Lunchtime Seminar Series, September 2020, CRN

[265] **A-I Krahelskaya**, Abbas Milani[a], **Mahdi Takaffoli, "**Polices with explicit indicators and targets aid in defining the goals of circular economy and are valuable tools in measuring progress", Inaugural Cluster Trainee Poster Session, February 2020, UBC Okanagan

[266] **R. Osmond**, **D. Dhir, M. Takaffoli**, G. Bogyo, R. Ryde, K. Golovin, A. Milani[a], **"**Optimizing a plastination technique for preservation of natural fibre composites", Inaugural Cluster Trainee Poster Session, February 2020, UBC Okanagan; also presented in "Progress in Canadian Mechanical Engineering", Volume 4, Charlottetown PE, Canada, June 27-30, 2021.

[267] **B. Crawford**, A.S. Milani[a] (2019) "Towards an Industry 4.0-based, progressive decision support system for advanced composites manufacturing: A case study in autoclave processing", Boeing Lunchtime Seminar Series, October 2019, CRN

[268] **S. Kazemi**, A.S. Milani[a] (2019) “Towards intelligent forming of woven fabrics: adapting Industry 4.0 concepts (2019), 3rd Industry 4.0 Symposium, June 5, Western University, London, Canada

[269] **S. Kazemi**, A.S. Milani[a] (2019) “Towards intelligent forming of woven fabrics through industry 4.0”, 5th Poster Competition, February 9, School of Engineering, UBC Okanagan (Awarded the Best Research Presentation)

[270] **R. Sourki**, R. Vaziri, A.S. Milani[a] (2018) “Multi-scale forming simulation of fabrics under loading-unloading conditions”, Boeing Lunchtime Seminar Series, October 2018, CRN

[271] **M. Haghi Kashani**, **A. Hosseini**, F. Ko, A.S. Milani[a] (2017) “Process-induced wrinkling in woven fabric reinforcements: Moving toward enhanced forming simulations under large shear deformation”, Boeing Lunchtime Seminar Series, October 2017, CRN

[272] **A. Rashidi**, A.S. Milani[a] (2017) “Towards mitigation of process-induced wrinkling in manufacture of fabric prepregs”, Boeing Lunchtime Seminar Series, July 2017, CRN

[273] **M. Haghi Kashani**, **A. Hosseini**, F. Sasani, F.K. Ko, A.S. Milani[a] (2016) “Bias Extension test or Picture Frame test? Toward a best-practice for characterizing the true shear behavior of woven fabrics for forming simulations”, The Pacific Centre for Advanced Materials and Microstructures (PCAMM) Conference, December 10, UBC Vancouver, (Poster Presentation)

[274] **M. Haghi Kashani**, **A. Hosseini**, F. Sasani, A.S. Milani[a], F.K. Ko (2016) “A mechanism-based analytical model for predicting the onset of wrinkling in plain-woven composite preforms”, The Pacific Centre for Advanced Materials and Microstructures (PCAMM) Conference, December 10, UBC Vancouver, (Poster Presentation)

[275] **N. Kazemian**, J. Klironomos, A S. Milani[c] (2015) “Environmental factors influencing fungal growth on gypsum boards and their biodegradation”, 1st Annual Biology Graduate Symposium, September 11, 2015, UBC Okanagan (Poster Presentation)

[276] **F. Islam**, A. S. Milani[b], J. Ramkumar (2015) “On prediction and quantification of damage during milling of unidirectional carbon fiber reinforced plastics”, 10th International Conference on Manufacturing Advanced Composites (ICMAC), June 24-25, Bristol, UK (Abstract and oral presentation)

[277] **M. Haghi Kashani**, A.S. Milani[a] (2015) “Enhanced damage modelling of consolidated woven composites”, 2nd Annual Engineering Graduate Symposium, June 8th, 2015, School of Engineering, UBC Okanagan (Poster Presentation)

[278] **A. Rashidi, S. Sultana, B. Crawford, M. DeWachter,** A.S. Milani[a] (2015) “Towards wrinkling-free forming of woven composite materials”, 2nd Annual Engineering Graduate Symposium, June 8th, 2015, School of Engineering, UBC Okanagan (Awarded among top-three Research Poster Presentations)

[279] **M. Shah Mohammadi**, **L. Solnickova**, B. Crawford, **M. Komeili**, A. S. Milani[a], “Investigating the unrecovered displacement of glass fibre reinforced polymers due to processing conditions”, TA Instruments Technical Publications (Industrial case studies), 2013

[280] **M. Komeili**, A.S. Milani[a] (2013) “ Towards a general-purpose finite element model for the simulation of woven fabrics deformation during forming processes”, 3rd Poster Competition, April 28th, 2013, School of Engineering, UBC Okanagan (Received the honorary-4th place award in PhD Poster Presentations competition)

[281] **M. Komeili**, A.S. Milani[a], P. Cavallaro, A. Sadegh (2012) "Towards understanding the effect of combined loading in the mechanical response of woven fabrics", 2nd Poster Competition, March 29th, 2012, School of Engineering, UBC Okanagan (Awarded the Best PhD Research Poster Presentation)

[282] K. N. Hewage, M. Yeheyis, A. S. Milani[c], **A. Mosavi**, **M. Azodinia** (2011) "Grapheur support touch decisions within construction projects", Poster Presentation at EnginSoft International Conference, 20-21 October, Verona, Italy

[283] **K. Gordnian**, A. S. Milani[c], A. Poursartip (2011) "Effects of crystallinity on mechanical properties of glass fibre reinforced polypropylene", Abstract Submission and Presentation at the 23rd Canadian Materials Science Conference (CMSC), Kelowna, Canada

[284] **M. Komeili**, A. S. Milani[a] (2011) "An elaboration on the material characterization of woven fabrics using bias-extension tests", Abstract Submission and Presentation at the 23rd Canadian Materials Science Conference (CMSC), Kelowna, Canada

[285] **D. Motamedi**, A. S. Milani[a] (2011) "A performance-based optimization approach for selecting composite materials under damage criteria", Abstract Submission and Presentation at the 23rd Canadian Materials Science Conference (CMSC), Kelowna, Canada

[286] **M. Alemi-Ardakani**, A. S. Milani[a], S. Yannacopoulos (2011) "Impact behaviour of Twintex composite sandwich panels", Abstract Submission and Presentation at the 23rd Canadian Materials Science Conference (CMSC), Kelowna, Canada

[287] **C. Lynam**, A. S. Milani[a] (2011) "Roll forming process modeling of thermoplastic composites", Abstract Submission and Presentation at the 23rd Canadian Materials Science Conference (CMSC), Kelowna, Canada

[288] **M. Nourani**, A. S. Milani[a], S. Yannacopoulos, C. Yan (2011) "Developing an integrated multi-physics model for friction stir welding of aluminum 6061", Abstract Submission and Presentation at the 23rd Canadian Materials Science Conference (CMSC), Kelowna, Canada

[289] **S. Rakhshani**, A. S. Milani[a], A. Rteil (2011) "Using a multi-criteria decision making method to select optimum high-bulk acrylic yarns", Abstract Submission and Presentation at the 23rd Canadian Materials Science Conference (CMSC), Kelowna, Canada

[290] **H. Rokni**, A. S. Milani[a], R. J. Seethaler (2010) "The effect of carbon nanotubes on the tensile strength of epoxy composites: a statistical design and analysis of experiments", Abstract Submission and Presentation at the ASME International Mechanical Engineering Congress & Exposition, Vancouver, Canada

[291] **H. Rokni**, R. J. Seethaler, A. S. Milani[c] (2010) "Improved mechanical design for a fully variable electromechanical valve actuation system for internal combustion engines", Abstract Submission and Presentation at the ASME International Mechanical Engineering Congress & Exposition, Vancouver, Canada

[292] A. S. Milani[a], R. C. Abeyaratne, D. D. Frey, **H. Wang** (2007) "On fast and robust optimization methodologies for layout and material design of laminated structures", Abstract Submission and Presentation at the 9th U.S. National Congress on Computational Mechanics (USNCCM9), Minisymposium #71, San Francisco, USA

2. NON-REFEREED PUBLICATIONS

(a) Journals

(b) Conference Proceedings

(c) Other (>15 technical reports as part of contract-based industrial projects*)*

3. BOOKS

(a) Authored

[293] **H. Montazerian**, M. Hoorfar[a], A. S. Milani[a] (2021) “Sensor-Integrated Composites: From Structural Health Monitoring to Material Characterization”, DEStech Publications, Lancaster, USA (in press)

[294] **C. Lynam**, A. S. Milani[a] (2014) “ A Guide to Modeling Thermoplastic Composite Manufacturing Processes: Optimizing Process Variables and Tooling Design Using Finite Element Analysis”, DEStech Publications, Lancaster, USA (94 pages; ISBN: 978-1-60595-042-6)

[295] **M. Nourani**, A. S. Milani[b], S. Yannacopoulos (2014), “Friction Stir Welding of Aluminum Alloys”, Scholars' Press, Saarbrücken, Germany (232 pages; ISBN-10: 3639707737)

[296] **M. Komeili**, A. S. Milani (2010) "Meso-Level Analysis of Uncertainties in Woven Fabrics", VDM Verlag, Berlin, Germany (132 pages, ISBN 978-3-639-29716-4)

[297] **M. Mahmoudi**, P. Stroeve, A. S. Milani[c], A. S. Arbab (2010) "Superparamagnetic Iron Oxide Nanoparticles: Synthesis, Surface Engineering, Cytotoxicity and Biomedical Applications", Nova Science Publishers, New York, USA (225 pages, ISBN: 978-1-61728-631-5) (over 100 copies sold world-wide to date)

[298] A. S. Milani (2008) “Model Identification of Textile Composites”, VDM Verlag, Saarbrücken, Germany (124 pages, ISBN 3639059166)

(b) Edited

[299] M. Bacciocchi, A. S. Milani[a] (Guest Editors), Special Issue “Feature Papers in Simulation and Design”, (Journal of) Materials, (2021)

[300]F. Ko, A. S. Milani[a] (Guest Editors), Special Issue on “Biocomposites – A Path Towards Circular Economy"", Molecules (2019-2020)

[301] A. S. Milani[a] (Guest Editor), Special Issue on “Modeling and Simulation of Advanced Composite Materials”, (Journal of) Materials, (2017)

[302] R. Refiee, T. Rabczuk, K.I. Tserpes, A. S. Milani[a] (Guest Editors), Special Issue on “Advances in Characterization and Modeling of Nano-reinforced Composites”, Journal of Nanomaterials, 2016

[303] P. Harrison, A. S. Milani[a], R. Rafiee (Guest Editors), Special Issue on “Modeling, Characterization, and Processing of Advanced Composites” in the International Journal of Advances in Materials Science and Engineering, 2013

[304] A. S. Milani[b], A. Jahan (Guest Editors), Special Issue on “Materials Selection and Design” in the International Journal of Materials and Structural Integrity (Vol. 6, Nos. 2/3/4, pp. 95-338) , 2012

[305] R.C. Hibbeler, “Statics & Dynamics”-- Pearson Custom Engineering Mechanics Book, Edited by R. Taheri, R. Seethaler, A. S. Milani[c]-- UBC Okanagan, 2011

(c) Chapters

[306] **A. Esmaeili-Douki**, **B. Crawford**, A. Ardestani-Jaafari, A. S. Milani[b] (2021) “An integrated AI-multiple criteria decision-making framework to improve sustainable energy planning in manufacturing systems: A case study”, In: “Handbook of Smart Energy Systems” (eds. E. Zio, M. Fathi, P. Pardalos), Springer (23 pages) (accepted).

[307] **R. Osmond**, K. Golovin, A S. Milani[a] (2021) “Review of Chemical Treatments of Natural Fibres: A Novel Plastination Approach”, In: “Green Composites” (ed. S. Thomas and P. Balakrishnan), Springer (Chapter 23, pp 599-617).

[308] **B. Crawford**, H. Khayyam, A. S. Milani[b], R. Jazar (2020) “Big Data Modeling Approaches for Engineering Applications”, In: “Nonlinear Approaches in Engineering Applications” (ed. R. Jazar and L. Dai), Springer (Chapter 8, pp 1-20).

[309] **C.-S. Liao**, A. Labun, M. Jahandardoost, A. S. Milani[a] (2018) “A network approach to thermo-electrical modeling of textile composite structures”, In: “Polymer-Matrix Composites: Materials, Mechanics and Applications” (ed. E. Rice and B. Spark), Nova Science Publishers (Chapter 7, pp 1-28).

[310] **N. Kazemian**, **S. Pakpour**, **B. Crawford**, J. Klironomos, A. S. Milani[a] (2017) “The effect of biodeterioration on mechanical properties of hemp natural fiber reinforced composite”, In: “Advances in Materials Science Research. Volume 27” (ed. M.C. Wythers), Nova Science Publishers (Chapter 7, pp 1-12); also presented at the Canadian - International Conference on Composites (CANCOM15)

[311] **A. Olson**, **B. Crawford**, A. S. Milani[a] (2017) “Characterization of thermal conductivity and tool-part thermal resistance in composite processing”, In: “Advances in Materials Science Research. Volume 27” (ed. M.C. Wythers), Nova Science Publishers (Chapter 6, pp 1-9); also presented at the Canadian - International Conference on Composites (CANCOM15)

[312] **M. Haghi Kashani**, A. S. Milani[a] (2016) “Damage prediction in woven and non-woven fabric composites”, In: “Non-woven Fabrics", Editor: Han-Yong Jeon, InTech Publisher, ISBN 978-953-51-4586-8 (Chapter 10, pp. 233-262) (Awarded ‘impressive readership impact results’ by the publisher—over 100 downloads shorty after publication)

[313] **H. Teimouri**, A. S. Milani[a], R. Seethaler (2013) “On the effect of fabrication and testing uncertainties in structural health monitoring”, In: “Design of Experiments – Applications”, Editor: Messias
Borges Silva, InTech Publisher, ISBN 978-953-51-1168-9 (Chapter 2, pp. 21-40) (selected among the most downloaded articles in the journal website: over 2000 times to date)

[314] **M. Komeili**, A. S. Milani (2011) “Finite element modeling of woven fabric composites at meso-level under combined loading modes”, In: “Advances in Modern Woven Fabrics Technology", Editor: Savvas G. Vassiliadis, InTech Publisher, ISBN 978-953-307-1452-7 (Chapter 4, pp. 65-78)

[315] **M. Mahmoudi**, A. Simchi, M. Imani, A. S. Milani[c], P. Stroeve, H. A. Shivaee (2009) “In vitro study of bare and poly (ethylene glycol)-co-fumarate coated superparamagnetic iron oxide nanoparticles for reducing potential risks to humans and the environment”, in: “Sustainable

Energy", Editor: F. Columbus, Nova Science Publishers, ISBN: 978-1-60876-263-7 (Chapter 19, pp. 649-666)

[316] A. S. Milani (1999) "Finite Element Stress Analysis of Thin Shells under Pure Bending Load Using First Order Continuity", in: M. Haghpanahi, editor. Finite Element Method, IUST Publications, Tehran, Iran (Chapter 1, 19 pages)

4. PATENTS

[317] 'A new test fixture for combined biaxial-shear testing of woven fabrics', designed and manufactured in collaboration with the City College of New York, and the NUWC (under submission)

5. SPECIAL COPYRIGHTS

6. ARTISTIC WORKS, PERFORMANCES, DESIGNS

7. OTHER WORKS

[318] **M. Ramezankhani**, **B. Crawford,** S. Mund, A.S. Milani[a] (2017) "Application of composite materials in mobile food truck tandoor ovens", Composites Research Network, Brief Tech (industry report) CRNO- 13092017-1

[319] **B. Crawford**, C. Kopas, G. Cowburn, E. Boyle, A.S. Milani[a] (2017) "Experimental investigation of the load-response and failure mode behaviour of modern dental implant materials", Composites Research Network, Brief Tech (industry report) CRNO- 13092017-1

[320] **H. Montazerian**, **B. Crawford**, D. Derbowka, A.S. Milani[a] (2017) "Mechanical behavior of fiberglass/unsaturated polyester composites, with biochar filler for carbon sequestration, under three-point bending", Composites Research Network, Brief Tech (industry report) CRNO-23032017-1

[321] **B. Crawford, R. Vahed,** M. Porter, A.S. Milani[a] (2017) "Characterization of the degradation of lignin-coated particle board under accelerated ageing conditions of temperature and humidity", Composites Research Network, Brief Tech (industry report) CRNO-16042017-1

[322] **B. Crawford**, H. Borazghi, A.S. Milani[a] (2017) "The use of right-sized simulation to aid in better decision-making for complex composite materials manufacturing systems", Composites Research Network, Brief Tech (industry report) CRNO-14082017-1

[323] **B. Crawford**, D. Tamaki, A.S. Milani[a] (2017) "Cost modeling of the manufacture of a GFRP leisure boat hull for both open chopped spray moulding and resin infusion processes", Composites Research Network, Brief Tech (industry report) CRNO-11082017-1

[324] **B. Crawford**, **E. Smith-Griffiths**, A. Faour, A.S. Milani[a] (2017) "3D scanning of artistically-derived GFRP tooling for the production of parametric manufacturing drawings of tub shower products", Composites Research Network, Brief Tech (industry report) CRNO-29072017-1

[325] **B. Crawford**, M. Bureau, A.S. Milani[a] (2017) "Multiscale modeling of circular woven hoses towards the reduction of mechanically-driven in-situ performance defects", Composites Research Network, Brief Tech (industry report) CRNO- 02082017-1

[326] **D. Karimi, B. Crawford**, T. Harden, A.S. Milani[a] (2017) "Mechanical property study and analysis of a novel stone-polymer composite material using recycled granite slurry", Composites Research Network, Brief Tech (industry report) CRNO- -10062017-1

[327] A. S. Milani (2005) “A multi-objective inverse method for obtaining constitutive material parameters of textile composites using two hyperelastic models”, Ph.D. Dissertation, McGill University, Montreal, Canada (selected by VDM Verlag for book publication)

[328] A. S. Milani (2000) “Optimization of mechanical components using numerical and statistical methods”, MSc Dissertation, Iran University of Science and Technology, Tehran, Iran

[329] A. S. Milani (1997) “Design of 5-Speed Manual Gearbox (for National Car PAYKAN)”, BSc Dissertation, Iran University of Science and Technology, Tehran, Iran

[330] A. S. Milani (2009) “Multicriteria Optimization and Design of Experiments”, Custom Course Material, UBC Okanagan Bookstore, Kelowna, Canada

[331] A. S. Milani (2007) “MADM with Applications in Material Selection and Optimal Design”, Special Topic Graduate Course Document, Massachusetts Institute of Technology, Cambridge, USA

[332] A. S. Milani (2005) “An Introduction to Inverse Methods and Material Model Identification”, Special Topic Graduate Course Document, McGill University, Montreal, Canada

[333] A. S. Milani, J. A. Nemes (2002) “Constitutive models for the study of woven fabrics under basic deformation modes”, Technical Report (CLiMRI project), Industrial Materials Institute (IMI-NRC), Boucherville, Canada

[334] A. S. Milani (2000) "Hydraulic Gearboxes", 2nd Industrial Seminar in Heavy Machinery, IUST Publications, Tehran, Iran

[335] A. S. Milani (2000) "Different Aspects of Mechanical Power Train in Automobile", IUST Publications, Tehran, Iran

[336] A. S. Milani (2000) "Engineering Drawing (Volume I)", Azad University Publications, Tehran, Iran

[337] A. S. Milani (1999) "Power Train in Heavy Machinery", 1st Industrial Seminar in Heavy Machinery, IUST Publications, Tehran, Iran