

Acceleration data acquisition and processing system for structural health monitoring

Herranen, Henrik; Kuusik, Alar; Saar, Tõnis; Reidla, Marko; Land, Raul; Märten, Olev; Majak, Jüri 2014 IEEE International Workshop On Metrology For Aerospace : May 29-30, 2014, Benevento, Italy : proceedings 2014 / p. 244-248 : ill

Accuracy issues of the Haar wavelet method

Mikola, Madis; Haavajõe, Anti; Arak, Marti; Majak, Jüri; Pohlak, Meelis; Shvartsman, Boris 28th Nordic Seminar on Computational Mechanics, 22-23 October, Tallinn, 2015 : proceedings of the NSCM28 2015 / p. 103-106

Adhesion measuring method optimization in reinforced composites

Karjust, Kristo; Pohlak, Meelis; Majak, Jüri Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2 2012 / p. 633-638 : ill

An algorithm for determining forming limits of anisotropic metal sheets

Majak, Jüri; Küttner, Rein; Pohlak, Meelis NSCM-17 : proceedings of the 17th Nordic Seminar on Computational Mechanics 2004 / p. 39-42 : ill

An algorithm for localised and diffuse necking analysis

Majak, Jüri; Pohlak, Meelis; Küttner, Rein International journal of computational materials science and surface engineering 2007 / 4, p. 494-508 <https://www.inderscienceonline.com/doi/abs/10.1504/IJCMSSE.2007.016438>

Analysis and design of graphene laminates [Online resource]

Majak, Jüri; Kirs, Maarjus; Karjust, Kristo International Conference "Functional Materials and Nanotechnologies 2017" : Tartu, Estonia in April, 24-27, 2017 : book of abstracts 2017 / p. 67 http://www.ester.ee/record=b4668793*est

Analysis and design of multifunctional laminated glass composite structures

Majak, Jüri; Pohlak, Meelis; Õunapuu, Erko; Auriemma, Fabio; Rämmal, Hans; Saarts, Samo 24th International Conference on Composites/Nano-Engineering : ICCE-24 : Haikou, Hainan Island, China, July 17-23, 2016 2016 / [2] p. : ill

Analysis and design optimisation of glass structures = Klaaskonstruksioonide analüüs ning optimeerimine

Õunapuu, Erko 2019 <https://digikogu.taltech.ee/et/Item/1851ce66-14f9-486e-9153-414b75cb0495> https://www.ester.ee/record=b5284651*est

Application of artificial intelligence and machine learning for BIM : review

Bassir, David; Lodge, Hugo; Chang, Haochen; Majak, Jüri; Chen, Gonfa International journal for simulation and multidisciplinary design optimization 2023 / art. 5 <https://doi.org/10.1051/smdo/2023005> [Journal metrics at Scopus](#) [Article at Scopus](#)

Application of evolutionary methods for solving optimization problems in engineering

Majak, Jüri; Küttner, Rein; Pohlak, Meelis; Eerme, Martin; Karjust, Kristo Proceedings of NordDesign 2008 : August 21-23, 2008 2008 / p. 39-48 : ill
https://www.researchgate.net/publication/283626005_Application_of_evolutionary_methods_for_solving_optimization_problems_in_engineering

Application of HOHWM based function approximation algorithms in engineering design

Mäe, Tiina; Plamus, Tiia; Majak, Jüri; Karunanidhi, Ramachandran; Rahman, Md Toufique International conference of numerical analysis and applied mathematics ICNAAM 2021 : Rhodes, Greece, 20-26 September 2021 2023 / art. 250003
<https://doi.org/10.1063/5.0162255> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Application of the Haar wavelet based discretization technique to problems of orthotropic plates and shells

Majak, Jüri; Pohlak, Meelis; Eerme, Martin Mechanics of composite materials 2009 / 6, p. 631-642

Application of the Haar waveletbased discretization method

Majak, Jüri; Eerme, Martin; Pohlak, Meelis 5th International Conference Aplimat 2006 / p. 279-286

Application of wavelet based discretization method to elasticity and plasticity problems

Majak, Jüri; Pohlak, Meelis; Eerme, Martin 6th European Solid Mechanics Conference 2006 / ? p

Artificial neural networks and evolutionary algorithms in engineering design

Velsker, Tarmo; Majak, Jüri; Pohlak, Meelis; Eerme, Martin; Karjust, Kristo Journal of achievements in materials and manufacturing engineering 2011 / p. 88-95 : ill

Artificial neural networks and genetic algorithms in engineering design

Majak, Jüri; Pohlak, Meelis; Eerme, Martin; Küttner, Rein; Karjust, Kristo International Conference on Engineering Optimization (EngOpt 2008) : Rio de Janeiro, Brazil, 2008 : conference proceedings 2008 / [11 p] : ill
https://www.researchgate.net/publication/253023189_Artificial_neural_networks_and_genetic_algorithms_in_engineering_design

Autonomous mobile robots for production logistics: a process optimization model modification

Raamets, Tõnis; Majak, Jüri; Karjust, Kristo; Mahmood, Kashif; Hermaste, Aigar Proceedings of the Estonian Academy of

Characterisation of exponentially graded materials by ultrasound

Braunbrück, Andres; Majak, Jüri ICCS17 : 17th International Conference on Composite Structures : Portugal 17-21 June 2013 : book of abstracts 2013 / p. 55

A comparative analysis of Fuzzy AHP and Fuzzy VIKOR methods for prioritization of the risk criteria of an autonomous vehicle system

Mehrpavar, Marmar; Majak, Jüri; Karjust, Kristo Proceedings of the Estonian Academy of Sciences 2024 / p. 116-123
<https://doi.org/10.3176/proc.2024.2.04> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparing two wavelet approaches for solving fractional differential equations

Majak, Jüri; Kivistik, Lenart; Eerme, Martin; Tungel, Ernst International Conference of Numerical Analysis and Applied Mathematics : ICNAAM2022 : Heraklion, Freece, 19-25 September 2022 2024 / art. 230004 <https://doi.org/10.1063/5.0210415>
[Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Convergence theorem for the Haar wavelet based discretization method

Majak, Jüri; Shvartsman, Boris; Kirs, Maarjuss; Pohlak, Meelis; Herranen, Henrik Composite structures 2015 / p. 227-232
<https://doi.org/10.1016/j.compstruct.2015.02.050> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Decomposition method for solving optimal material orientation problems

Majak, Jüri; Pohlak, Meelis 15th International Conference on Composite Structures : Portugal, Porto 2009 / ? p

Decomposition method for solving optimal material orientation problems

Majak, Jüri; Pohlak, Meelis Composite structures 2010 / 8, p. 1839-1845
<https://www.sciencedirect.com/science/article/pii/S0263822310000346>

Design and manufacturing of composite laminates with structural health monitoring capabilities

Herranen, Henrik; Majak, Jüri; Tšukrejev, Pavel; Karjust, Kristo; Märtens, Olev Procedia CIRP 2018 / p. 647-652 : ill
<https://doi.org/10.1016/j.procir.2018.03.128> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Design and testing of new composite from recycled GFRP

Kers, Jaan; Majak, Jüri; Goljandin, Dmitri; Saarna, Mart; Gregor, Andre; Siinmaa, A.; Tall, Kaspar 14th European Conference on Composite Materials : 7-10 June 2010, Budapest, Hungary 2010 / [10] p

Design and testing of sandwich structures with different core materials

Herranen, Henrik; Pabut, Ott; Eerme, Martin; Majak, Jüri; Pohlak, Meelis; Kers, Jaan; Saarna, Mart; Allikas, Georg; Aruniit, Aare Materials science = Medžiagotyra 2012 / p. 45-50 : ill
https://www.researchgate.net/publication/268366546_Design_and_Testing_of_Sandwich_Structures_with_Different_Core_Materials

Design of car frontal protection system using neural networks and genetic algorithm

Majak, Jüri; Pohlak, Meelis; Eerme, Martin; Velsker, Tarmo Mechanika 2012 / p. 453-460 : ill
<https://mechanika.ktu.lt/index.php/Mech/article/view/2325>

Design of functionally graded sandwich panels

Pohlak, Meelis; Majak, Jüri; Karjust, Kristo; Herranen, Henrik; Lend, Henri ICCS17 : 17th International Conference on Composite Structures : Portugal 17-21 June 2013 : book of abstracts 2013 / p. 55

Design of light-weight sandwich panels for trailers

Allikas, Georg; Kers, Jaan; Aruniit, Aare; Herranen, Henrik; Eerme, Martin; Majak, Jüri; Pohlak, Meelis; Pabut, Ott ECCM15 - 15th European Conference on Composite Materials : Venice, Italy, 24-28 June 2012 2012 / 8 p. : ill
https://www.researchgate.net/publication/290060877_Design_of_light-weight_sandwich_panel_for_trailers

Design of multifunctional laminated glass composite panel

Majak, Jüri; Pohlak, Meelis; Shvartsman, Boris; Ōunapuu, Erko; Kirs, Maarjuss ICCS19 : 19th International Conference on Composite Structures : Sheraton Porto Hotel & Spa, 5-8 September 2016 : proceedings 2016 / p. 140 <http://dx.doi.org/10.15651/978-88-748-8977-8>

Design of performance characteristics on laser treated denim fabric

Mandre, Nele; Plamus, Tiia; Linder, Angelika; Varjas, Toivo; Majak, Jüri; Krumme, Andres The materials science = Medžiagotyra 2023 / 10 p. : ill <https://doi.org/10.5755/j02.ms.33259> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Design of performance characteristics on laser treated denim fabric : [conference paper]

Mandre, Nele; Plamus, Tiia; Linder, Angelika; Varjas, Toivo; Majak, Jüri; Krumme, Andres Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / p. 36 : ill [Graduate School of Functional Materials and](#)

Design optimization of graphene laminates for maximum fundamental frequency

Majak, Jüri; Kirs, Maarjus; Eerme, Martin; Tungal, Ernst; Lepikult, Toomas Proceedings of the Estonian Academy of Sciences 2017 / p. 354-362 : ill <https://doi.org/10.3176/proc.2017.4.08> https://artiklid.elnet.ee/record=b2830810*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Design optimization of multilayer graphene sheets

Majak, Jüri; Eerme, Martin; Arak, Marti; Kirs, Maarjus; Mikola, Madis First International Conference on Mechanics of Composites (MECHCOMP2014) : Stony Brook University, Long Island, New York, June 8-12, 2014 2014 / p. 175

Design optimization of steel and glass structures = Metall- ja klaaskonstruksioonide optimeerimine

Velsker, Tarmo 2012

Design optimization of structural components for fatigue loading

Pabut, Ott; Eerme, Martin; Majak, Jüri; Pohlak, Meelis Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [I] 2010 / p. 131-135 : ill

Development and implementation of the key performance indicator selection model for SMEs = Väikese ja keskmise suurusega ettevõtete võtmenäitajate valimimudeli arendus ja juurutus

Kaganski, Sergei 2018 <https://digi.lib.ttu.ee/i/?9945> https://www.ester.ee/record=b5054656*est

Development and optimisation of production monitoring system = Tootmise monitooringu süsteemi arendus ja optimeerimine

Snatkin, Aleksei 2016 https://www.ester.ee/record=b4576990*est

Development of a product lifecycle management model based on the fuzzy analytic hierarchy process

Paavel, Marko; Karjust, Kristo; Majak, Jüri Proceedings of the Estonian Academy of Sciences 2017 / p. 279-286 : ill <https://doi.org/10.3176/proc.2017.3.05> http://www.ester.ee/record=b2355998*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development of equipment and mathematical model for manufacturing of steered fibre laminate = Seadmete ja matemaatilise mudeli arendamine muutuva kiuga laminaadi valmistamiseks

Haavajõe, Anti 2019 https://www.ester.ee/record=b5284222*est <https://digikogu.taltech.ee/et/Item/3328472d-4a53-4e56-a892-93453155327c>

Development of process optimization model for autonomous mobile robot used in production logistics

Majak, Jüri; Karjust, Kristo; Mahmood, Kashif; Hermaste, Aigar; Raamets, Tõnis AIP conference proceedings 2024 / art. 020008 <https://doi.org/10.1063/5.0189299> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Difficulties in SMEs and KPI selection model as solver

Kaganski, Sergei; Paavel, Marko; Karjust, Kristo; Majak, Jüri; Snatkin, Aleksei Proceedings of the 10th International Conference of DAAAM Baltic Industrial Engineering, 12-13th May 2015, Tallinn, Estonia 2015 / p. 33-38 : ill

Double-curved surface forming process modeling

Velsker, Tarmo; Majak, Jüri; Eerme, Martin; Pohlak, Meelis Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [I] 2010 / p. 257-262 : ill

Effect of aggregation methods in fuzzy technique for prioritization of criteria of automated vehicle system

Mehrparvar, Marmar; Majak, Jüri; Karjust, Kristo AIP conference proceedings 2024 / art. 020011 <https://doi.org/10.1063/5.0189323> [Journal metrics at Scopus](#) [Article at Scopus](#)

Embedded electronics influence on the strength of carbon fiber laminate

Herranen, Henrik; Kers, Jaan; Preden, Jürjo-Sören; Talalaev, Robert; Eerme, Martin; Majak, Jüri; Lend, Henri; Allikas, Georg Advances in applied materials and electronics engineering III 2014 / p. 239-243 <https://doi.org/10.4028/www.scientific.net/AMR.905.239> [Article at Scopus](#)

Empennage sizing using tail volume

Karunanidhi, Ramachandran; Scholz, Dieter; Majak, Jüri; Eerme, Martin AIP conference proceedings 2022 / art. 380007 <https://doi.org/10.1063/5.0082095> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Engineering optimization of a car frontal protection system component

Pohlak, Meelis; Majak, Jüri; Eerme, Martin Estonian journal of engineering 2009 / 1, p. 61-72 : ill

Enhanced Crack Detection in Composite Plates : Integrating Haar Wavelet Transform with Convolutional Neural Networks

Mehrpavar, Marmar; Majak, Jüri; Karjust, Kristo 6th International Conference on Multidisciplinary Design Optimization and Applications (MDOA 2024) 2025 / art. 01008 https://www.e3s-conferences.org/articles/e3sconf/abs/2025/31/e3sconf_mdoa2025_01008/e3sconf_mdoa2025_01008.html
<https://doi.org/10.1051/e3sconf/202563101008>

Evaluation of Haar wavelet method for analysis of functionally graded and nanostructures = Haari lainikute meetodi hindamine funktsionaalgradient- ja nanostruktuuride analüüsiks

Kirs, Maarjus 2018 <https://digi.lib.ttu.ee/i/?10625> https://www.ester.ee/record=b5151220*est

Experimental evaluation and numerical modelling of the quality of photovoltaic modules

Tšukrejev, Pavel; Karjust, Kristo; Majak, Jüri Proceedings of the Estonian Academy of Sciences 2021 / p. 477-483 : ill
<https://doi.org/10.3176/proc.2021.4.15> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental evaluation and numerical modelling residual stresses in glass panel

Majak, Jüri; Anton, Johan; Õunapuu, Erko; Auriemma, Fabio; Pohlak, Meelis; Eerme, Martin; Klauson, Aleksander 2018 International Conference on Materials Science and Manufacturing Engineering (MSME 2018) MATEC web of conferences 2019 / art. 02003, 7 p. : ill <https://doi.org/10.1051/mateconf/201925302003>

Experimental modal analysis of maritime composite panel

Gavrijaševa, Alina; Märten, Olev; Land, Raul; Saar, Tõnis; Herranen, Henrik; Majak, Jüri; Reidla, Marko; Kuusik, Alar BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 143-146 : ill http://www.ester.ee/record=b2150914*est

Experimental study of incremental forming of sheet metal products

Pohlak, Meelis; Küttner, Rein; Majak, Jüri; Karjust, Kristo; Sutt, Annes Proceedings of the 4th International Conference Industrial Engineering - New Challenges to SME : 29-30 April 2004, Tallinn, Estonia 2004 / p. 145-148 : ill

Extremes of apparent and tap densities of recovered GFRP filler materials

Kers, Jaan; Majak, Jüri; Goljandin, Dmitri; Gregor, Andre; Malmstein, M.; Vilsaar, Kristiina Composite structures 2010 / 9, p. 2097-2101 : ill <https://www.sciencedirect.com/science/article/pii/S0263822309004085>

Extremes of apparent and tap densities of recovered GFRP filler materials

Kers, Jaan; Majak, Jüri; Gregor, Andre; Malmstein, M.; Vilsaar, Kristiina 15th International Conference on Composite Structures : Portugal, Porto 2009 / ? p <https://www.sciencedirect.com/science/article/pii/S0263822309004085>

Forming limit diagrams (FLD) for anisotropic sheet metals

Majak, Jüri; Küttner, Rein; Pohlak, Meelis 13th International Conference on Mechanics of Composite Materials 2004 / p. 107-108

Free vibration analysis of tapered Timoshenko beam with higher order Haar wavelet method

Mehrpavar, Marmar; Majak, Jüri; Karjust, Kristo; Arda, Mustafa Proceedings of the Estonian Academy of Sciences 2022 / p. 77-83 : ill <https://doi.org/10.3176/proc.2022.1.07> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

Free vibration analysis of Timoshenko beam by higher-order Haar wavelet method

Mehrpavar, Marmar; Majak, Jüri; Karjust, Kristo AIP conference proceedings 2023 / art. 250007 <https://doi.org/10.1063/5.0162269>
[Conference proceedings at Scopus](#) [Article at Scopus](#)

Free vibration analysis of uniform and tapered timoshenko beam by higher-order haar wavelet method

Mehrpavar, Marmar; Majak, Jüri; Karjust, Kristo Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 38 l. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Function approximation using Haar wavelets

Majak, Jüri; Eerme, Martin; Haavajõe, Anti AIP conference proceedings 2020 / art. 230004 <https://doi.org/10.1063/5.0026543>
[Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Fuzzy AHP as a tool for prioritization of key performance indicators

Kaganski, Sergei; Majak, Jüri; Karjust, Kristo Procedia CIRP 2018 / p. 1227-1232 : ill <https://doi.org/10.1016/j.procir.2018.03.097>
[Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Fuzzy analytical hierarchy process based environmental, social and governance risks assessment for the future phosphorite mining in Estonia

Paat, Andrus; Majak, Jüri; Karu, Veiko; Hitch, Michael William Extractive Industries and Society 2024 / art. 101438
<https://doi.org/10.1016/j.exis.2024.101438> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Haar wavelet based discretization technique for analysis and design of composite plate and shell structures

Majak, Jüri; Pohlak, Meelis; Eerme, Martin; Karjust, Kristo; Kers, Jaan 14th European Conference on Composite Materials : 7-

Haar wavelet method for vibration analysis of nanobeams

Kirs, Maarjus; Mikola, Madis; Haavajõe, Anti; Õunapuu, Erko; Shvartsman, Boris; **Majak, Jüri** Waves, wavelets and fractals : advanced analysis 2016 / p. 20-28 : ill <https://doi.org/10.1515/wwfaa-2016-0003>

Higher order Haar wavelet method for vibration analysis of functionally graded beam

Mikola, Madis; Majak, Jüri; Pohlak, Meelis; Shvartsman, Boris AIP Conference Proceedings 2022 / art. 380003
<https://doi.org/10.1063/5.0081476> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Higher-order Haar wavelet method for vibration analysis of nanobeams

Majak, Jüri; Shvartsman, Boris; **Ratas, Mart;** Bassir, David; **Pohlak, Meelis; Karjust, Kristo; Eerne, Martin** Materials today communications 2020 / art. 101290, 6 p. : tab <https://doi.org/10.1016/j.mtcomm.2020.101290> [Journal metrics at Scopus](#) [Article at Scopus](#)
[Journal metrics at WOS](#) [Article at WOS](#)

Human-robot interaction : a conceptual framework for safety/risk analysis

Matsulevitš, Johannes; Majak, Jüri; Eerne, Martin; Sarkans, Martinš; Dunajeva, Olga; Kristjuhan-Ling, Kadri; Raamets, Tõnis; Kekšin, Vjatšeslav Proceedings of the Estonian Academy of Sciences 2025 / p. 137-142
<https://doi.org/10.3176/proc.2025.2.09>

Implementation of key performance indicators selection model as part of the enterprise analysis model

Kaganski, Sergei; Majak, Jüri; Karjust, Kristo; Toompalu, Silver Procedia CIRP 2017 / p. 283-288 : ill
<https://doi.org/10.1016/j.procir.2017.03.143> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Implementing an AI-based digital twin analysis system for real-time decision support in a custom-made sportswear SME

Raamets, Tõnis; Karjust, Kristo; Majak, Jüri; Hermaste, Aigar Applied sciences 2025 / art. 7952
<https://doi.org/10.3390/app15147952>

Incremental sheet forming process modelling - limitation analysis

Pohlak, Meelis; Majak, Jüri; Küttner, Rein Proceedings M2D'2006: 5th International Conference on Mechanics and Materials in Design : Faculty of Engineering, University of Porto, Portugal, 24-26 July 2006 2006 / p. 1-12 : ill

Incremental sheet forming process modelling - limitation analysis

Pohlak, Meelis; Majak, Jüri; Küttner, Rein Journal of achievements in materials and manufacturing engineering 2007 / 2, p. 67-70 : ill

Influence of hollow glass microspheres on the mechanical and physical properties and cost of particle reinforced polymer composites

Aruniit, Aare; Kers, Jaan; Majak, Jüri; Krumme, Andres; Tall, Kaspar Proceedings of the Estonian Academy of Sciences 2012 / p. 160-165 : ill https://artiklid.einet.ee/record=b2535363*est

Komplekssete tehniliste süsteemide optimaalne projekteerimine - toodete konkursivõime tagamise eeltingimus

Küttner, Rein; Eerne, Martin; Karjust, Kristo; Majak, Jüri; Pohlak, Meelis Teadusmõte Eestis. 4, Tehnikateadused. 2 2007 / lk. 71-80 : ill

Longitudinal wave propagation in axially graded Rayleigh–Bishop nanorods

Arda, Mustafa; Majak, Jüri; Mehrparvar, Marmar Mechanics of composite materials 2024 / p. 1109-1128
<https://doi.org/10.1007/s11029-023-10160-4> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Manufacturability and limitations in incremental sheet forming

Pohlak, Meelis; Majak, Jüri; Küttner, Rein Proceedings of the Estonian Academy of Sciences. Engineering 2007 / 2, p. 129-139 : ill

Manufacturability issues in incremental sheet forming

Pohlak, Meelis; Majak, Jüri; Küttner, Rein Proceedings of the 5th International Conference of DAAAM Baltic : Industrial Engineering - Adding Innovation Capacity of Labour Force and Entrepreneur : 20-22 April 2006, Tallinn, Estonia 2006 / p. 157-162 : ill

Material parameters identification by use of hybrid GA

Majak, Jüri; Toompalu, S.; Pohlak, Meelis Journal of achievements in materials and manufacturing engineering 2008 / 1, p. 63-66 : ill https://www.researchgate.net/publication/26872864_Material_parameters_identification_by_use_of_hybrid_GA

Modeling constitutive relation for woven polymer-based composites

Majak, Jüri; Pohlak, Meelis; Küttner, Rein; Eerne, Martin; Herranen, Henrik NATO Advanced Research Workshop : Textile Composites : May 18-22, 2009, Kiev, Ukraine 2009 / [3] p

Modelling a new composite from a recycled GFRP

Kers, Jaan; Majak, Jüri Mechanics of composite materials 2008 / 6, p. 623-632 : ill

<https://ui.adsabs.harvard.edu/abs/2008MCM....44..623K/abstract>

Modelling and optimal design of sheet metal RPAMP processes

Pohlak, Meelis; Küttner, Rein; Majak, Jüri Rapid prototyping journal 2005 / 5, p. 304-311 : ill

<https://www.proquest.com/docview/214029707?sourcetype=Scholarly%20Journals>

Modelling and optimal design of sheet metal RPAMP processes

Küttner, Rein; Pohlak, Meelis; Majak, Jüri 10th European Forum on Rapid Prototyping 2004 / p. 7

<https://www.proquest.com/docview/214029707?sourcetype=Scholarly%20Journals>

Modelling and optimal design of the incremental forming process

Pohlak, Meelis; Küttner, Rein; Majak, Jüri Proceedings of the Estonian Academy of Sciences. Engineering 2004 / 4, p. 261-269 : ill

Modelling and testing of the properties of recovered composite material

Kers, Jaan; Goljandin, Dmitri; Tall, Kaspar; Aruniit, Aare; Adoberg, Eron; Saarna, Mart; Majak, Jüri Proceedings of the Tenth International Conference on Computational Structures Technology : Valencia, Spain, 14-17 September 2010 / Paper 81

https://www.researchgate.net/publication/269140253_Modelling_and_Testing_of_the_Properties_of_Recovered_Composite_Material

Modelling FGM materials. An accurate function approximation algorithms

Majak, Jüri; Mikola, Madis; Pohlak, Meelis; Eerme, Martin; Karunanidhi, Ramachandran IOP conference series : materials science and engineering 2021 / art. 012013, 6 p <https://doi.org/10.1088/1757-899X/1140/1/012013>

Multicriteria optimization of large composite parts

Pohlak, Meelis; Majak, Jüri; Küttner, Rein; Karjust, Kristo 15th International Conference on Composite Structures ICCS 15 : University of Porto, Porto, Portugal, 15-17 June 2009 / p. 1-2

Multi-criteria optimization of large composite parts

Pohlak, Meelis; Majak, Jüri; Karjust, Kristo; Küttner, Rein Composite structures 2010 / 9, p. 2146-2152 : ill

<https://www.sciencedirect.com/science/article/abs/pii/S0263822309003791>

Multi-layer cyber-physical control method for mobile robot safety systems

Pikner, Heiko; Sell, Raivo; Majak, Jüri; Karjust, Kristo Proceedings of the Estonian Academy of Sciences 2021 / p. 383-391 : ill

<https://doi.org/10.3176/proc.2021.4.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Multi-objective topology optimization of weight critical structures

Pohlak, Meelis; Majak, Jüri; Pääsuke, Kaarel; Eerme, Martin; Kõiv, Risto 16th International Conference on Composite Structures (ICCS16) : Porto, 28-30 June 2011 2011

Multistage optimisation strategy for solving production planning problems

Küttner, Rein; Majak, Jüri Control applications of optimization. Vol. 7, part 1 2009 / p. 332-337 : ill

Nanoscale vibration analysis of graphene sheets using nonlocal elasticity theory

Majak, Jüri; Pohlak, Meelis; Eerme, Martin; Kers, Jaan Proceedings of the International Conference on Mechanics of Nano, Micro and Macro Composite Structures : 18 to 20 June 2012 2012 / [1] p

Nanoscale vibration analysis of graphene sheets using nonlogical elasticity theory

Majak, Jüri; Kirs, Maarjus; Mikola, Madis; Heero, Marek; Herranen, Henrik ICCE 21 proceedings 2013

Nanoscale vibration analysis of orthotropic graphene sheets

Majak, Jüri; Eerme, Martin; Lepikult, Toomas; Tungel, Ernst ICCS17 : 17th International Conference on Composite Structures : Portugal 17-21 June 2013 : book of abstracts 2013

New higher order Haar wavelet method : application to FGM structures

Majak, Jüri; Pohlak, Meelis; Karjust, Kristo; Eerme, Martin; Kurnitski, Jarek; Shvartsman, Boris Composite Structures 2018 / p. 72-78 : tab <https://doi.org/10.1016/j.compstruct.2018.06.013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Numerical analysis of dynamics of flight of the fragments

Kivistik, Lenart; Eerme, Martin; Majak, Jüri; Kirs, Maarjus AIP conference proceedings 2024 / art. 030016

<https://doi.org/10.1063/5.0189331> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Numerical analysis of nonlinear wave propagation = Mittelineaarse lainelevi numbriline analüüs

Ratas, Mart 2020 https://www.ester.ee/record=b5391019*est <https://digikogu.taltech.ee/et/Item/96b84b2f-8dc3-4c25-8c58-a5dde59d14ea>

Numerical method for stability analysis of functionally graded beams on elastic foundation

Shvartsman, Boris; **Majak, Jüri** Applied Mathematical Modelling 2016 / p. 3713 - 3719 <https://doi.org/10.1016/j.apm.2015.09.060>
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#)

Numerical method for stability analysis of functionally graded columns

Shvartsman, B.S.; **Majak, Jüri**; **Kirs, Maarjus** Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 65-70 : ill

Numerical modeling of fragment flight dynamics

Kivistik, Lenart; **Mehrpavar, Marmar**; **Eerme, Martin**; Dieves, Veiko; **Majak, Jüri** Proceedings of the Estonian Academy of Sciences 2025 / p. 120-125 <https://doi.org/10.3176/proc.2025.2.06>

Numerical solution of a class of fractional delay differential equations via haar wavelet

Aziz, Imran; Amin, Rohul; **Majak, Jüri** Proceedings of the 11th International Conference of DAAAM Baltic Industrial Engineering : 20-22th April 2016, Tallinn, Estonia 2016 / p. 8-12 <http://innomet.ttu.ee/daaam/>

On accuracy of the Haar wavelet method

Majak, Jüri; Shvartsman, Boris; **Pohlak, Meelis**; **Eerme, Martin**; **Kirs, Maarjus** Mathematical modelling and analysis 2016 : abstracts 2016 / p. 50 http://www.ester.ee/record=b4573512*est

On the accuracy of the Haar wavelet discretization method

Majak, Jüri; Shvartsman, Boris; **Karjust, Kristo**; **Mikola, Madis**; **Haavajõe, Anti**; **Pohlak, Meelis** Composites Part B : Engineering 2015 / p. 321-327 : tab <https://doi.org/10.1016/j.compositesb.2015.06.008> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Optimal adhesion area of the glass-fiber reinforcement layer

Karjust, Kristo; **Pohlak, Meelis**; **Majak, Jüri** 14th European Conference on Composite Materials : 7-10 June 2010, Budapest, Hungary 2010 / [10] p

Optimal adhesion measuring methods of the glass fibre reinforcement layer

Karjust, Kristo; **Pohlak, Meelis**; **Majak, Jüri** Estonian journal of engineering 2010 / 4, p. 297-306 : ill

Optimal adhesion measuring methods of the glass-fiber reinforcement layer

Karjust, Kristo; **Pohlak, Meelis**; **Majak, Jüri** Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [I] 2010 / p. 232-237 : ill

Optimal material orientation of linear and non-linear elastic 3D anisotropic materials

Majak, Jüri; **Pohlak, Meelis** Proceedings of Second International Conference on Multidisciplinary Design Optimization and Applications : Gijon, Spain, 3-5 September 2008 2008 / p. 1-11 : ill

Optimal material orientation of linear and non-linear elastic 3D anisotropic materials

Majak, Jüri; **Pohlak, Meelis** Meccanica 2010 / 5, p. 671-680 : ill
https://www.researchgate.net/publication/225119702_Optimal_material_orientation_of_linear_and_non-linear_elastic_3D_anisotropic_materials

Optimal product development and manufacturing engineering

Küttner, Rein; **Majak, Jüri**; **Karjust, Kristo**; **Pohlak, Meelis**; **Eerme, Martin** Research in Estonia : present and future 2011 / p. 227-248 : ill

Optimization of car frontal protection system

Pohlak, Meelis; **Majak, Jüri**; **Eerme, Martin** International journal for simulation and multidisciplinary design optimization 2007 / p. 31-37 https://www.researchgate.net/publication/245491476_Optimization_of_car_frontal_protection_system

Optimization of car frontal protection systems

Pohlak, Meelis; **Majak, Jüri**; **Eerme, Martin** Proceedings of the 6th International Conference of DAAAM Baltic "Industrial Engineering" : 24-26th April 2008, Tallinn, Estonia. [1] 2008 / p. 123-128 : ill
https://www.researchgate.net/publication/245491476_Optimization_of_car_frontal_protection_system

Optimization study of car frontal protection system

Pohlak, Meelis; **Majak, Jüri**; **Eerme, Martin** ASMDO : First International Conference on Multidisciplinary Design Optimization and Applications : 17-20 April 2007, Besancon, France 2007 / ? p <https://www.ijsmdo.org/articles/smdo/abs/2007/01/smdo0706/smdo0706.html>

Optimization study of composite bathtub

Pohlak, Meelis; **Majak, Jüri**; **Karjust, Kristo**; **Küttner, Rein** Proceedings of Second International Conference on Multidisciplinary Design Optimization and Applications : Gijon, Spain, 3-5 September 2008 2008 / p. 1-10 : ill

Orientational design of non-orthotropic 2-D materials

Majak, Jüri Tenth Nordic Seminar on Computational Mechanics, Tallinn Technical University, October 24-25, 1997 1997 / p. 303-306

An overview of smart workplace solutions and potential improvement areas

Kelpman, Karolin; Karjust, Kristo; Majak, Jüri Proceedings of the Estonian Academy of Sciences 2025 / p. 155-159

<https://doi.org/10.3176/proc.2025.2.13>

Particulate filled composite plastic materials from recycled GFRP

Kers, Jaan; Goljandin, Dmitri; Saarna, Mart; Aruniit, Aare; Tall, Kaspar; Majak, Jüri Baltic Polymer Symposium 2010 : Palanga, September 8-11, 2010 : programme and abstracts 2010 / p. 15

Particulate filled composite plastic materials from recycled glass fibre reinforced plastics

Aruniit, Aare; Kers, Jaan; Goljandin, Dmitri; Saarna, Mart; Tall, Kaspar; Majak, Jüri; Herranen, Henrik Materials science = Medžiagotyra 2011 / p. 276-281 : ill

Photovoltaic modules, design and manufacturing = Fotoelektrilised moodulid, disain ja tootmine

Tšukrejev, Pavel 2023 <https://doi.org/10.23658/taltech.45/2023> <https://digikogu.taltech.ee/et/Item/a5fe0434-e0d3-4bec-9a61-4444d3d51901>
https://www.ester.ee/record=b5574956*est

Plate model for multifunctional laminated glass composite panel

Majak, Jüri; Pohlak, Meelis; Shvartsman, Boris; Öunapuu, Erko; Kirs, Maarjus ICCS19 : 19th International Conference on Composite Structures : Sheraton Porto Hotel & Spa, 5-8 September 2016 : proceedings 2016 / p. 140 <http://dx.doi.org/10.15651/978-88-748-8977-8>

PLM maturity model development and implementation in SME

Paavel, Marko; Karjust, Kristo; Majak, Jüri Procedia CIRP 2017 / p. 651-657 <https://doi.org/10.1016/j.procir.2017.03.144> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Preface : Computational Mechanics

Majak, Jüri; Sciuva, M. D. AIP conference proceedings 2020 / art. 230001 <https://doi.org/10.1063/5.0026521> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Preface of the “Symposium on Numerical Analysis and Optimal Design of Materials and Structures”

Majak, Jüri; Bassir, David AIP Conference Proceedings 2022 / art. 380001 <https://doi.org/10.1063/5.0081481> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Preface: Computational mechanics. Analysis and design optimization

Majak, Jüri International Conference on Numerical Analysis and Applied Mathematics (ICNAAM 2018), 13–18 September 2018 2019 / art. 330001 <https://doi.org/10.1063/1.5114339> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Prioritization of key performance indicators for small and medium enterprises

Kaganski, Sergei; Karjust, Kristo; Majak, Jüri Proceedings of the 11th International Conference of DAAAM Baltic Industrial Engineering : 20-22th April 2016, Tallinn, Estonia 2016 / p. 25-30 : ill <http://innomet.ttu.ee/daaam/>

Product lifecycle management maturity model development = Toote elutsükli halduse küpsusmudeli arendus

Paavel, Marko 2018 <https://digi.lib.ttu.ee/i/?9949> https://www.ester.ee/record=b5056151*est

Production monitoring system development and modification

Snatkin, Aleksei; Eiskop, Tanel; Karjust, Kristo; Majak, Jüri Proceedings of the Estonian Academy of Sciences 2015 / p. 567-580 : ill https://artiklid.elnet.ee/record=b2750888*est <https://doi.org/10.3176/proc.2015.4S.04> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Quality of photovoltaic modules, experimental evaluation and mathematical modelling

Tšukrejev, Pavel; Karjust, Kristo; Majak, Jüri IOP conference series : materials science and engineering 2021 / art. 012044, 7 p. : ill <https://doi.org/10.1088/1757-899X/1140/1/012044>

Real time production monitoring system in SME

Snatkin, Aleksei; Karjust, Kristo; Majak, Jüri; Aruväli, Tanel; Eiskop, Tanel Estonian journal of engineering 2013 / p. 62-75 <https://doi.org/10.3176/eng.2013.1.06> [Article at Scopus](#)

Real-time crack detection on concrete using non-destructive approaches based on Yolo series : Review

Bassir, David; Chang, Haochen; Majak, Jüri Advances in Machinery, Materials Science and Engineering Application X : Proceedings of the 10th International Conference (MMSE 2024), Paris, France, 27–28 July 2024 2024 / p. 820-826 <https://doi.org/10.3233/ATDE240712> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Real-time monitoring of solar modules manufacturing

Tšukrejev, Pavel; Kruuser, Kaarel; Gorbachev, Georgy; Karjust, Kristo; Majak, Jüri International journal of engineering research in Africa 2020 / p. 9-13 <https://doi.org/10.4028/www.scientific.net/JERA.51.9> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Safety system assessment case study of automated vehicle shuttle

Pikner, Heiko; Sell, Raivo; Majak, Jüri; Karjust, Kristo Electronics (Switzerland) 2022 / art. 1162

<https://doi.org/10.3390/electronics11071162> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Selection of parameters in adhesive bonding of composite structures

Kers, Jaan; Saarna, Mart; Peetsalu, Priidu; Aruniit, Aare; Majak, Jüri; Pohlak, Meelis; Herranen, Henrik 20th International Baltic Conference Materials Engineering 2011, October 27-28, Kaunas, Lithuania : book of abstracts 2011 / p. 53

A simple algorithm for formability analysis

Majak, Jüri; Pohlak, Meelis; Küttner, Rein Journal of achievements in materials and manufacturing engineering 2007 / 1, p. 57-60 : ill https://www.researchgate.net/publication/40784145_A_simple_algorithm_for_formability_analysis

Simulation of incremental forming of sheet metal products

Pohlak, Meelis; Küttner, Rein; Majak, Jüri; Karjust, Kristo; Sutt, Annes Proceedings of the 4th International Conference Industrial Engineering - New Challenges to SME : 29-30 April 2004, Tallinn, Estonia 2004 / p. 149-151 : ill

Simulation of incremental forming processes of sheet metal

Pohlak, Meelis; Küttner, Rein; Majak, Jüri Proceedings of 3th International Conference on Advances in Production Engineering : Warsaw, Poland, June 17-19, 2004. Part II 2004 / p. 133-140

Solution of fractional order differential equation by the Haar wavelet method. Numerical convergence analysis for most commonly used approach

Majak, Jüri; Shvartsman, Boris; Pohlak, Meelis; Karjust, Kristo; Eerme, Martin; Tungel, Ernst International Conference of Numerical Analysis and Applied Mathematics 2015 (ICNAAM 2015) : 22-28 September 2015, Rhodes, Greece 2016 / p. 480110-1 - 480110-4 <https://doi.org/10.1063/1.4952346> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Solving nonlinear boundary value problems using the higher order Haar wavelet Method

Ratas, Mart; Majak, Jüri; Salupere, Andrus Mathematics 2021 / art. 2809 <https://doi.org/10.3390/math9212809> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Solving nonlinear PDEs using the higher order Haar wavelet method on nonuniform and adaptive grids

Ratas, Mart; Salupere, Andrus; Majak, Jüri Mathematical modelling and analysis 2021 / p. 147-169

<https://doi.org/10.3846/mma.2021.12920> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Solving ordinary differential equations with higher order Haar wavelet method

Majak, Jüri; Pohlak, Meelis; Eerme, Martin; Shvartsman, Boris AIP conference proceedings 2019 / art. 330002

<https://doi.org/10.1063/1.5114340> [Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Static response and buckling loads of multilayered composite beams using the refined Zigzag theory and Higher-Order Haar Wavelet method

Sorrenti, M.; Di Sciua, M.; Majak, Jüri; Auriemma, Fabio Mechanics of composite materials 2021 / 18 p

<https://doi.org/10.1007/s11029-021-09929-2> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Stationary of the strain energy density in anisotropic solids

Majak, Jüri; Pohlak, Meelis World journal of engineering 2011 / p. 765-766

<https://www.sciencedirect.com/science/article/abs/pii/S0020768303003718>

Stationary of the strain energy density in anisotropic solids

Majak, Jüri; Pohlak, Meelis 8th World Congress on Structural and Multidisciplinary Optimization 2009 / ? p

A symbolic-numerical algorithm for material parameter identification

Majak, Jüri; Pohlak, Meelis; Küttner, Rein; Eerme, Martin; Karjust, Kristo; Kers, Jaan Proceedings of the Tenth International Conference on Computational Structures Technology : Valencia, Spain, 14-17 September 2010 2010 / Paper 133

Symbolic-numerical algorithm for material parameters identification

Majak, Jüri; Küttner, Rein; Pohlak, Meelis First International Conference on Multidisciplinary Design Optimization and Applications : 17-20 April 2007, Besancon, France : book of abstracts 2007 / p. 68 https://www.researchgate.net/publication/269140167_A_Symbolic-Numerical_Algorithm_for_Material_Parameter_Identification

Technology route planning of large composite parts

Karjust, Kristo; Pohlak, Meelis; Majak, Jüri International journal of material forming 2010 / Suppl. 1, p. 631-634 : ill

<https://link.springer.com/article/10.1007/s12289-010-0849-2>

The influence of embedded electronics on the structural performance in carbon fiber laminates

Herranen, Henrik; Kers, Jaan; Preden, Jürjo-Sören; Talalaev, Robert; Eerne, Martin; Majak, Jüri; Pohlak, Meelis; Allikas, Georg; Pabut, Ott; Lend, Henri Proceedings of the International Conference on Mechanics of Nano, Micro and Macro Composite Structures : 18 to 20 June 2012 2012 / [2 p.]

TTÜ masinaehituse instituut : tööstuse konkurentsivõime tõstmine

Otto, Tauno; Lavrentjev, Jüri; Majak, Jüri TTÜ mehaanikateaduskond. Eesti Masinatööstuse Liit 2011 / lk. 33-42 : ill., fot
http://www.ester.ee/record=b2720689*est

Using stochastic optimization for modelling of the new composite from recycled GFP

Kers, Jaan; Goljandin, Dmitri; Majak, Jüri Proceedings of the 6th International Conference of DAAAM Baltic "Industrial Engineering" : 24-26th April 2008, Tallinn, Estonia. [2] 2008 / p. 461-466 : ill

Wavelet based discretization method for solving linear and nonlinear elasticity problems [Electronic resource]

Majak, Jüri; Pohlak, Meelis; Lepikult, Toomas III European Conference on Computational Mechanics 2006 / [CD-ROM]

Wavelet based discretization technique for analysis and design of composite structures

Majak, Jüri; Kers, Jaan; Pohlak, Meelis; Eerne, Martin; Luiga, K. The 18th International Conference on Composite Materials. Composite materials : key to the future 2011 / [6] p

Wavelet discretization based elasticity solutions to some orthotropic plate and shell problems

Majak, Jüri; Pohlak, Meelis; Eerne, Martin XIV International Conference Mechanics of Composite Materials 2006 / p. 121

Weak formulation based Haar wavelet method for solving differential equations

Majak, Jüri; Pohlak, Meelis; Eerne, Martin; Lepikult, Toomas Applied mathematics and computation 2009 / p. 488-494