

Accuracy of the Mindlin model in A0 Lamb mode scattering from partial through-thickness damage

Lints, Martin; Ratassepp, Madis Applied Sciences (Switzerland) 2024 / art. 9351 <https://doi.org/10.3390/app14209351> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Acoustic forward model for guided wave propagation and scattering in a pipe bend

Rasgado Moreno, Carlos Omar; Rist, Marek; Land, Raul; Ratassepp, Madis Sensors 2022 / art. 486 <https://doi.org/10.3390/s22020486> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Application of Mindlin Theory to Describe the Scattering of Guided Waves From Notches in a Plate

Rasheed, Usman; Lints, Martin; Ratassepp, Madis ASME 2022 49th Annual Review of Progress in Quantitative Nondestructive Evaluation (QNDE2022) 2022 <https://event.asme.org/Events/media/library/resources/qnde/QNDE-2022-Final-Program.pdf> <https://qnde.secure-platform.com/a/solicitations/178/sessiongallery/11537/application/98050>

Application of multidimensional laser measurement for Lamb wave testing

Ratassepp, Madis Measuring by light 2014, a topical workshop on "Quality Control, Condition Monitoring and Predictive Maintenance Using Optical Measurement Techniques" 2014

Application of orthogonality-relation for the separation of Lamb modes at a plate edge : numerical and experimental predictions

Ratassepp, Madis; Klauson, Aleksander; Chati, Farid Ultrasonics 2015 / p. 90-95 : ill <https://doi.org/10.1016/j.ultras.2014.10.022> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Applying guided waves for the characterization of defects in isotropic plates

Ratassepp, Madis; Rihma, Joonas; Klauson, Aleksander OAS 2011 : International Conference on Optimization and Analysis of Structures, August 25-27, 2011, Tartu, Estonia : abstracts 2011 / p. 38

Automatic detection of real and imaginary parts of electrical impedance with single synchronous demodulation channel

Annus, Paul; Priidel, Eiko; Land, Raul; Metshein, Margus; Krivošei, Andrei; Min, Mart; Ratassepp, Madis; Märten, Olev 8th European Medical and Biological Engineering Conference : Proceedings of the EMBEC 2020, November 29 - December 3, 2020 Portorož, Slovenia 2021 / p. 151-157 https://doi.org/10.1007/978-3-030-64610-3_18 [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Axial defect imaging in a pipe using synthetically focused guided waves

Ratassepp, Madis; Fletcher, Sam; Klauson, Aleksander Estonian journal of engineering 2011 / 1, p. 66-75 : ill

Breakdown of classical models in highly damped ultrasonic propagation

Lafarge, D.; Bouchendouka, A.; Fellah, Z. E. A.; Scotti, T.; Ogam, E.; Perrot, C.; Depollier, C.; Ratassepp, Madis; Chrysochoidis, N. The Journal of the Acoustical Society of America 2025 / p. 2389-2403 <https://doi.org/10.1121/10.0039247>

Convolution of Barker and Mutually Orthogonal Golay Complementary Codes for Ultrasonic Testing

Peng, Chengxiang; Annus, Paul; Rist, Marek; Land, Raul; Ratassepp, Madis Sensors 2025 / art. 5007 <https://doi.org/10.3390/s25165007>

Curvature effects on wave propagation in an infinite pipe

Ratassepp, Madis; Klauson, Aleksander Ultragarsas = Ultrasound 2006 / 2(59), Proceedings of the International Conference "Non-Destructive Testing and Diagnostics - 2006" : 26-27 May 2006, Vilnius, p. 19-25 : ill https://www.ndt.net/article/ultragarsas/59-2006-vol.2_04-m.ratassepp.pdf

Damage detection in quasi-isotropic composite bends using ultrasonic feature guided waves

Yu, Xudong; Ratassepp, Madis; Fan, Zheng Composites Science and Technology 2017 / p. 120-129 : ill <https://doi.org/10.1016/j.compscitech.2017.01.011>

Detection of axial cracks in pipes using focused guided waves

Fletcher, Sam; Lowe, Michael John Stewart; Ratassepp, Madis; Brett, Colin Journal of nondestructive evaluation 2012 / p. 56-64 : ill https://www.researchgate.net/publication/234956324_Detection_of_Axial_Cracks_in_Pipes_Using_Focused_Guided_Waves

Developing guided wave tomography for a pipe bend = Ultrahelitimograafia toru põlvede kontrollimiseks

Rasgado Moreno, Carlos Omar 2025 https://www.ester.ee/record=b5736911*est <https://digikogu.taltech.ee/et/Item/aac8515a-2964-40c0-9048-983c52f48f1d> <https://doi.org/10.23658/taltech.18/2025>

Edge resonance in semi-infinite thick pipe : theoretical predictions and measurements

Ratassepp, Madis; Klauson, Aleksander; Chati, F.; Leon, Fernand; Maze, Gerard Journal of Acoustical Society of America 2008 / 2, p. 875-885 <https://pubmed.ncbi.nlm.nih.gov/18681580/>

Edge resonances in semi-infinite thick pipe : theoretical predictions and measurements [Electronic resource]

Ratassepp, Madis; Klauson, Aleksander; Chati, Farid; Leon, Fernand; Maze, Gerard Special issue of the Revista de Acustica :

19th international Congress on Acoustics, Madrid (Spain), 2-7 September 2007 / [6] p. [CD-ROM]
<https://pubs.aip.org/asa/jasa/article/124/2/875/841531/Edge-resonance-in-semi-infinite-thick-pipe>

Evaluation of elastic constants in composite laminates with guided wave tomography [Online resource]

Ratassepp, Madis; Rao, Jing; Yu, X.; Fan, Zheng 12th European Conference on Non-destructive Testing : proceedings 2018 / 7 p. : ill <http://cdn.ecndt2018.com/wp-content/uploads/2018/05/ecndt-0597-2018-File001.pdf> <http://www.ecndt2018.com/programme/list-of-authors/>

Experimental challenges of guided wave tomography based on full waveform inversion for a pipe bend

Rasgado Moreno, Carlos Omar; Xu, Panpan; **Ratassepp, Madis** Guided Ultrasonic Waves: Emerging Methods (GUWEM): Linslerhof, Germany, 8-11 July 2024 : Abstracts 2024 / p. 30 <https://doi.org/10.5281/zenodo.12517188>

Flexible data acquisition system with custom front-end for ultrasonic NDT research

Peng, Chengxiang; **Ratassepp, Madis**; **Anus, Paul**; **Rist, Marek**; **Land, Raul**; **Märtens, Olev** 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 4 p <https://doi.org/10.1109/BEC61458.2024.10737989> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Fractional Fourier transform-based signal separation for ultrasonic guided wave inspection of plates

Peng, Chengxiang; **Anus, Paul**; **Rist, Marek**; **Land, Raul**; **Ratassepp, Madis** Sensors 2024 / art. 7564
<https://doi.org/10.3390/s24237564> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Geodesic equations for guided wave helical path separation for a pipe bend

Rasgado Moreno, Carlos Omar; **Ratassepp, Madis** Mechanical systems and signal processing 2023 / art. 110820
<https://doi.org/10.1016/j.ymssp.2023.110820> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Guided wave tomography of pipe bends based on full waveform inversion

Rasgado Moreno, Carlos Omar; **Rist, Marek**; **Land, Raul**; **Ratassepp, Madis** Ultrasonics 2025 / art. 107560
<https://doi.org/10.1016/j.ultras.2024.107560>

Implementation of focused guided waves to locate axial defects in pipes

Fletcher, Sam; **Ratassepp, Madis**; Brett, C.; Lowe, Michael John Stewart The 48th Annual British Conference on NDT : Blackpool, UK, 14-17 September, 2009 2009 / ? p

Implementation of focused guided waves to locate axial defects in pipes

Fletcher, Sam; Lowe, Michael John Stewart; **Ratassepp, Madis**; Brett, C. Review of progress in quantitative nondestructive evaluation. Volume 29 2010 / p. 223-230 <https://doi.org/10.1063/1.3362398>

Investigation of signal separation for ultrasonic nondestructive evaluation

Peng, Chengxiang; **Ratassepp, Madis**; **Anus, Paul** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 l.
<https://doi.org/10.1109/BEC56180.2022.9935612>

Investigation of the reconstruction accuracy of guided wave tomography using full waveform inversion

Rao, Jing; **Ratassepp, Madis**; Fan, Zheng Journal of sound and vibration 2017 / p. 317-328 : ill <https://doi.org/10.1016/j.jsv.2017.04.017>

Lamb mode separation at the plate edge by applying the orthogonality relation

Ratassepp, Madis; **Klauson, Aleksander** 11th European Conference on Non-Destructive Testing (ECNDT 2014), October 6-10, 2014, Prague, Czech Republic 2014 / [8] p. : ill

Model of the plugging detection in metallic pipes using ultrasonic guided waves [Electronic resource]

Ratassepp, Madis; **Metsaveer, Jaan**; **Klauson, Aleksander** Eleventh International Congress on Sound and Vibration : St.Petersburg, Russia, 5-8 July 2004 2004 / p. 1937-1942 [CD-ROM]

Modeling the effect of anisotropy in ultrasonic-guided wave tomography

Ratassepp, Madis; Rao, Jing; Yu, Xudong; Fan, Zheng IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 2022 / p. 330-339 : ill <https://doi.org/10.1109/TUFFC.2021.3114432> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Multi-parameter reconstruction of velocity and density using ultrasonic tomography based on full waveform inversion

Rao, Jing; Yang, Jizhong; **Ratassepp, Madis**; Fan, Zheng Ultrasonics 2020 / art. 106004, 10 p. : ill
<https://doi.org/10.1016/j.ultras.2019.106004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Numerical Application of Guided Wave Tomography Based on Full Waveform Inversion for a Pipe Bend

Rasgado Moreno, Carlos Omar; **Ratassepp, Madis** ASME 2022 49th Annual Review of Progress in Quantitative Nondestructive Evaluation (QNDE2022) 2022 <https://event.asme.org/Events/media/library/resources/qnde/QNDE-2022-Final-Program.pdf> <https://qnde.secure-platform.com/a/solicitations/178/sessiongallery/11537/application/97567>

Numerical assessment of guided wave tomography in a pipe bend based on full waveform inversion

Rasgado Moreno, Carlos Omar; Ratassepp, Madis e-Journal of Nondestructive Testing (eJNDT) 2023 <https://www.ndt.net/?id=28371>

On-line corrosion monitoring of plate structures based on guided wave tomography using piezoelectric sensors

Rao, Jing; **Ratassepp, Madis**; Lisevych, Danylo; Caffoor, Mahadhir Hamzah; Fan, Zheng Sensors 2017 / art. 2882, p. 1-14 : ill <https://doi.org/10.3390/s17122882> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Optimising full waveform inversion with inhomogeneous transducers : parameters and considerations for successful implementation

Rasgado Moreno, Carlos Omar; Xu, Panpan; Rist, Marek; **Ratassepp, Madis** SSRN 2024 / 11 p <https://doi.org/10.2139/ssrn.4848530>

Optimising full waveform inversion with inhomogeneous transducers: Parameters and considerations for successful implementation

Rasgado Moreno, Carlos Omar; Xu, Panpan; **Rist, Marek; Ratassepp, Madis** NDT & E International 2025 / art. 103265 <https://doi.org/10.1016/j.ndteint.2024.103265>

Passenger ship source level determination in shallow water environment

Mustonen, Mirko; Klauson, Aleksander; Laanearu, Janek; Ratassepp, Madis; Folegot, Thomas; Clorennec, Dominique Proceedings of Meetings on Acoustics 2016 / art. 070015, p. 1-9 : ill <http://dx.doi.org/10.1121/2.0000323>

Quantification of thickness loss in a liquid-loaded plate using ultrasonic guided wave tomography

Rao, Jing; **Ratassepp, Madis**; Fan, Zheng Smart materials and structures 2017 / art. 125017, 10 p : ill <http://dx.doi.org/10.1088/1361-665X/aa95e9>

Quantification of thickness loss in liquid-loaded pipes based on guided wave tomography

Rao, Jing; **Ratassepp, Madis**; Fan, Zheng The 7th Asia-Pacific Workshop on Structural Health Monitoring, 2018 Nov, Hong Kong, China (APWSHM 2018) 2019 / 9 p. : ill <https://www.ndt.net/search/docs.php3?id=24103>

Quantitative imaging of elongated thickness defects in pipelines using ultrasonic guided wave tomography

Rasgado Moreno, Carlos Omar; Ratassepp, Madis ASME 2023 International Mechanical Engineering Congress and Exposition (IMECE2023) : proceedings. Vol. 1 2023 / art. 112228 <https://doi.org/10.1115/IMECE2023-112228>

Quantitative imaging of Young's modulus in plates using guided wave tomography

Ratassepp, Madis; Rao, Jing; Fan, Zheng NDT&E international 2018 / p. 22-30 : ill <https://doi.org/10.1016/j.ndteint.2017.09.016>

Reflection of the fundamental torsional guided wave mode from axially aligned defects in pipes

Fletcher, Sam; **Ratassepp, Madis**; Lowe, Michael John Stewart; Brett, C.; Trelawny, J. Anglo-French Physical Acoustics Conference abstracts : Arcachon, France, 8-10 December 2008 2008 / p. 8

Scattering of the fundamental shear horizontal mode in a plate when incident at a through-crack aligned in the propagation direction of the mode

Ratassepp, Madis; Lowe, Michael John Stewart; Cawley, P.; **Klauson, Aleksander** Journal of Acoustical Society of America 2008 / 5, p. 2873-2882 <https://pubmed.ncbi.nlm.nih.gov/19045775/>

Scattering of the fundamental torsional mode at an axial crack in a pipe

Ratassepp, Madis; Fletcher, Sam; Lowe, Michael John Stewart The journal of the Acoustical Society of America 2010 / 2, p. 730-740 : ill <https://pubs.aip.org/asa/jasa/article/127/2/730/917913/Scattering-of-the-fundamental-torsional-mode-at-an>

Separation of Lamb modes at a plate edge by using orthogonality relation

Ratassepp, Madis; Klauson, Aleksander; Chati, Farid; Leon, Fernand; Maze, Gerard Estonian journal of engineering 2013 / p. 283-291 : ill https://artiklid.elnet.ee/record=b2654277*est <https://doi.org/10.3176/eng.2013.4.03> [Article at Scopus](#)

SH0 mode interaction with the propagation directional crack in a plate

Ratassepp, Madis; Lowe, Michael John Stewart Review of Progress in Quantitative Nondestructive Evaluation. Vols. 28A and 28B 2009 / p. 161-168 : ill

Synthesis of the echo-signal from a cylindrical shell

Ratassepp, Madis; Metsaveer, Jaan; Klauson, Aleksander; Decultot, Dominique; Maze, Gerard Tenth International Congress on Sound and Vibration : 7-10 July 2003, Stockholm, Sweden 2003 / p. 2483-2490 : ill https://www.researchgate.net/publication/290165960_Synthesis_of_the_echo-signal_from_a_cylindrical_shell

Tallinna Tehnikaülikooli korvpalliklubi Kapa 1951-2026

2025 https://www.ester.ee/record=b5752833*est

Towards safe and sustainable building : reclaimed timber for structural use

Tienda Resendez, Francisco; Just, Alar; Kauniste, Maarja; Ratassepp, Madis Baltic Polymer Symposium 2025 : 23d International Scientific Conference BPS 2025 "Baltic Polymer Symposium 2025" : Book of abstracts 2025 / p. 33
<http://woodval.taltech.ee/wp-content/uploads/2025/07/BPS2025-Book-of-abstracts.pdf>

Ultraheli reedab materjalide nähtamatud vigastused

Ratassepp, Madis; Lints, Martin Horisont 2022 / lk. 48-52 : fot https://www.ester.ee/record=b1072243*est

Ultrasonic imaging of irregularly shaped notches based on elastic reverse time migration

Rao, Jing; Saini, Abhishek; Yang, Jizhong; **Ratassepp, Madis**; Fan, Zheng NDT&E international 2019 / art. 102135, 5 p. : ill
<https://doi.org/10.1016/j.ndteint.2019.102135> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Unsupervised fouling reconstruction in the pipe bend

lablonskyi, Denys; **Rasgado Moreno, Carlos Omar; Ratassepp, Madis**; Klami, Arto; Hæggström, Edward; Salmi, Ari 2023 IEEE International Ultrasonics Symposium (IUS) 2023 / 3 p <https://doi.org/10.1109/IUS51837.2023.10306373>

Using orthogonality-relation for the separation of Lamb modes at a plate edge

Ratassepp, Madis; Chati, Farid; **Klauson, Aleksander** Proceedings of the 2nd International Conference Optimization and Analysis of Structures : Tartu, Estonia, August 25-27, 2013 2013 / p. 129-134 : ill

Wave scattering at discontinuities in plates and pipes = Lainete interaktsioon defektidega plaatides ja torudes

Ratassepp, Madis; Klauson, Aleksander; Lowe, Michael John Stewart 2010 https://www.ester.ee/record=b2561121*est