

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](#)

An Analysis of Arterial Pulse Wave Time Features and Pulse Wave Velocity Calculations Based on Radial Electrical Bioimpedance Waveforms in Patients Scheduled for Coronary Catheterization

Lotamõis, Kristina; Uuetoa, Tiina; Krivošei, Andrei; Annus, Paul; Metshein, Margus; Rist, Marek; Margus, Sulev; Min, Mart; Tamberg, Gert Journal of Cardiovascular Development and Disease 2025 / art. 237 <https://doi.org/10.3390/jcdd12070237>

Binary signals in impedance spectroscopy

Min, Mart; Ojarand, Jaan; Märten, Olev; Paavle, Toivo; Land, Raul; Annus, Paul; Rist, Marek; Reidla, Marko; Parve, Toomas

Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference 2012 / p. 134-137 : ill

Bioimpedance spectro-tomography system using binary multifrequency excitation [Online resource]

Min, Mart; Lehti-Polojärvi, M.; Hyttinen, Jari; Rist, Marek; Land, Raul; Annus, Paul International journal of bioelectromagnetism

Proceedings of the 11th International Conference on Bioelectromagnetism : 23-25 May 2018, Aachen, Germany 2018 / p. 76-79 : ill

<http://www.ijbem.org/> <https://publications.rwth-aachen.de/record/723893/files/723893.pdf>

Comparison of excitation signals and methods for a wideband bioimpedance measurement

Ojarand, Jaan; Rist, Marek; Min, Mart I2MTC 2016 : 2016 IEEE International Instrumentation and Measurement Technology

Conference : May 23-26, 2016, Taipei International Convention Center, Taipei, Taiwan : proceedings 2016 / p. 1291-1296 : ill

<https://doi.org/10.1109/I2MTC.2016.7520555> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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>

Correlation between electrical bioimpedance and pressure waveform in radial artery and in mechanical pulsating pipe system

Metshein, Margus; Annus, Paul; Land, Raul; Rist, Marek; Min, Mart; Märten, Olev 2020 IEEE International Instrumentation and

Measurement Technology Conference (I2MTC 2020), May 25-29, 2020, Dubrovnik, Croatia : proceedings 2020

<https://doi.org/10.1109/I2MTC43012.2020.9128972>

Current source considerations for broadband bioimpedance spectroscopy

Annus, Paul; Min, Mart; Rist, Marek; Ojarand, Jaan; Land, Raul Lecture notes on impedance spectroscopy : measurement,

modeling and applications. Vol. 2 2012 / p. 63-73

Detection of surface defects in metals : a case study

Märten, Olev; Land, Raul; Metshein, Margus; Abdullayev, Anar; Vennikas, Henri; Le Moullec, Yannick; Rist, Marek

Proceedings of the Estonian Academy of Sciences 2025

Development of bioimpedance sensing device for wearable monitoring of the aortic blood pressure curve = Entwicklung eines Bioimpedanz-Messgerätes für die mobile Erfassung des aortalen Blutdruck

Kõiv, Hip; Rist, Marek; Min, Mart Technisches Messen 2018 / p. 366-377 : ill <https://doi.org/10.1515/teme-2017-0113> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Difference sampling in bio-impedance measurement

Annus, Paul; Rist, Marek; Reidla, Marko; Min, Mart Book of abstracts : 16th International Conference on Electrical Bio-Impedance :

17th Conference on Electrical Impedance Tomography : ICEBI and EIT Stockholm, 19-23 June 2016 2016 / p. 67

A DSP-based EBI, ECG and PPG measurement platform

Abdullayev, Anar; Rist, Marek; Märten, Olev; Metshein, Margus; Larras, Benoit; Frappe, Antoine; Gautier, Antoine; Min, Mart;

John, Deepu; Cardiff, Barry; Krivošei, Andrei; Annus, Paul IEEE transactions on instrumentation and measurement 2023 / art.

2007808, 8 p <https://doi.org/10.1109/TIM.2023.3320771> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

DSP-based electrical impedance tomography device: implementation and experiments

Abdullayev, Anar; Rist, Marek; Metshein, Margus; Märten, Olev 2025 IEEE International Instrumentation and Measurement

Technology Conference (I2MTC) 2025 / 6 p <https://doi.org/10.1109/I2MTC62753.2025.11079140>

A DSP-based impedance measurement device

Abdullayev, Anar; Märten, Olev; Rist, Marek; Metshein, Margus; Min, Mart; Annus, Paul 2022 18th Biennial Baltic Electronics

Conference (BEC) 2022 / 5 l. <https://doi.org/10.1109/BEC56180.2022.9935588>

A DSP-based multichannel EBI measurement device

Abdullayev, Anar; Rist, Marek; Krivošei, Andrei; Metshein, Margus; Land, Raul; Märten, Olev 2024 IEEE International Instrumentation and Measurement Technology Conference (I2MTC) : proceedings 2024
<https://doi.org/10.1109/I2MTC60896.2024.10560714> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Dynamic reference for evaluation of bioimpedance spectroscopy devices

Rist, Marek; Min, Mart 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. 107-110 : ill
http://www.ester.ee/record=b2150914*est

Dynamic volume measurement of right ventricle using impedance spectroscopy and multi electrode intraventricular catheter

Kink, Andres; Rist, Marek; Land, Raul; Kõiv, Hip; Min, Mart International Workshop on Impedance Spectroscopy : IWIS 2016 : September 26-28, 2016, Technische Universität Chemnitz, Germany : abstract book 2016 / p. 26-27 : ill

Eddy current corrosion measurement of steel

Märten, Olev; Land, Raul; Min, Mart; Rist, Marek; Ferenets, Marju; Käsper, Andres International Workshop on Impedance Spectroscopy : IWIS 2016 : September 26-28, 2016, Technische Universität Chemnitz, Germany : abstract book 2016 / p. 40-41 : ill

Eddy current corrosion measurement of steel

Märten, Olev; Land, Raul; Min, Mart; Rist, Marek; Ferenets, Marju; Käsper, Andres Impedance spectroscopy : advanced applications : battery research, bioimpedance, system design 2018 / p. 125-134 : ill <https://doi.org/10.1515/9783110558920-012>

Eddy current validation of Euro-coins

Gordon, Rauno; Märten, Olev; Land, Raul; Min, Mart; Rist, Marek; Gavrijaševa, Alina; Pokatilov, Andrei; Kolyshkin, Andrei Lecture notes on impedance spectroscopy : measurement, modeling and applications. Vol. 3 2012 / p. 47-63 : ill

Enhanced optimization of the wideband excitation signal for a bioimpedance measurement

Ojarand, Jaan; **Rist, Marek; Min, Mart** 2015 IEEE International Instrumentation and Measurement Technology Conference (I2MTC 2015) : May 11-14, 2015, Pisa, Italy : proceedings 2015 / p. 1801-1806 : ill <https://doi.org/10.1109/I2MTC.2015.7151554> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Fast precise eddy current measurement of metals

Märten, Olev; Land, Raul; Min, Mart; Rist, Marek; Annus, Paul; Pokatilov, Andrei 2018 IEEE International Instrumentation and Measurement Technology Conference (I2MTC 2018) : proceedings 2018 / 5 p. : ill <https://doi.org/10.1109/I2MTC.2018.8409781>

Fiducial point estimation solution for impedance cardiography measurements

Märten, Olev; Metshein, Margus; Abdullayev, Anar; Larras, Benoit; Frappe, Antoine; Gautier, Antoine; Saeed, Maryam; John, Deepu; Cardiff, Barry; Krivošei, Andrei; **Annus, Paul; Rist, Marek** 2022 IEEE International Instrumentation and Measurement Technology Conference (I2MTC) 2022 / Code 180602 <https://doi.org/10.1109/I2MTC48687.2022.9806596> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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

Peng, Chengxiang; Ratassepp, Madis; Annus, Paul; Rist, Marek; Land, Raul; Märten, 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; Annus, 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](#)

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>

Handheld impedance measurement platform for preliminary analysis in biomedicine and technology

Rist, Marek; Annus, Paul; Jaansoo, T. Lecture notes on impedance spectroscopy : measurement, modeling and applications. Vol. 2 2012 / p. 75-82

High-accuracy eddy current measurements of metals

Märten, Olev; Land, Raul; Rist, Marek; Pokatilov, Andrei 2014 IEEE International Workshop On Metrology For Aerospace : May 29-30, 2014, Benevento, Italy : proceedings 2014 / p. 155-160 : ill

How many frequencies to use in electrical bioimpedance measurement?

Ojarand, Jaan; Land, Raul; Min, Mart; Rist, Marek International Workshop on Impedance Spectroscopy : IWIS 2016 : September 26-28, 2016, Technische Universität Chemnitz, Germany : abstract book 2016 / p. 24-25 : ill

How many frequencies to use in electrical bioimpedance measurements

Ojarand, Jaan; Land, Raul; Min, Mart; Rist, Marek Impedance spectroscopy : advanced applications : battery research, bioimpedance, system design 2018 / p. 161–168 : ill <http://doi.org/10.1515/9783110558920-016>

Impedance measurement solution based on the high time resolution DSP

Märtens, Olev; Land, Raul; Min, Mart; Annus, Paul; Rist, Marek 2020 IEEE International Instrumentation and Measurement Technology Conference (I2MTC 2020), May 25–29, 2020, Dubrovnik, Croatia : proceedings 2020 <https://doi.org/10.1109/I2MTC43012.2020.9128843>

Improved impedance analyzer with binary excitation signals

Märtens, Olev; Land, Raul; Min, Mart; Annus, Paul; Rist, Marek; Reidla, Marko 2015 IEEE 9th International Symposium on Intelligent Signal Processing (WISP 2015) : Siena, Italy, 15–17 May 2015 : [proceedings] 2015 / p. 25–29 : ill

Limitation of signal amplitudes in bioimpedance spectroscopy

Ojarand, Jaan; Rist, Marek; Min, Mart Book of abstracts : 16th International Conference on Electrical Bio-Impedance : 17th Conference on Electrical Impedance Tomography : ICEBI and EIT Stockholm, 19–23 June 2016 2016 / p. 68

Measurement of the electric conductivity of highly conductive metals with 4-electrode impedance method

Gordon, Rauno; Rist, Marek; Märtens, Olev; Min, Mart Lecture notes on impedance spectroscopy : measurement, modeling and applications. Vol. 1 2011 / p. 35–40 <https://www.taylorfrancis.com/chapters/edit/10.1201/b11339-8/measurement-electric-conductivity-highly-conductive-metals-4-electrode-impedance-method-gordon-rist-m%C3%A4rtens-min>

Method and device for measurement of impedance of lithium-ion cells : design proposal for hand-held electrochemical impedance spectroscopy measurement device

Rist, Marek 2010 <https://www.amazon.co.uk/Method-device-measurement-impedance-lithium-ion/dp/3838389042>

A method of intra-ventricular bioimpedance spectroscopy to estimate the dynamic volume of right ventricle

Kink, Andres; Rist, Marek; Land, Raul; Kõiv, Hip; Min, Mart Impedance spectroscopy : advanced applications : battery research, bioimpedance, system design 2018 / p. 169–176 : ill <https://doi.org/10.1515/9783110558920-017>

Methods for detection of bioimpedance variations in resource constrained environments

Priidel, Eiko; Annus, Paul; Krivošei, Andrei; Rist, Marek; Land, Raul; Min, Mart; Märtens, Olev Sensors 2020 / art. 1363, 16 p. : ill <https://doi.org/10.3390/s20051363> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Modular system for fast impedance spectrum analysis of biomedical objects

Rist, Marek; Reidla, Marko; Märtens, Olev; Land, Raul; Min, Mart; Parve, Toomas; Annus, Paul XVth International Conference on Electrical Bio-Impedance (ICEBI) and XIVth Conference on Electrical Impedance Tomography (EIT) : 22–25 April 2013, Heilbad Heiligenstadt : abstracts 2013 / p. 151 : ill

Modular system for spectral analysis of time-variant impedances

Rist, Marek; Reidla, Marko; Land, Raul; Parve, Toomas; Märtens, Olev; Annus, Paul; Ojarand, Jaan; Min, Mart 6th European Conference of the International Federation for Medical and Biological Engineering : MBEC 2014, 7–11 September 2014, Dubrovnik, Croatia 2015 / p. 858–861 : ill https://doi.org/10.1007/978-3-319-11128-5_213 [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Notes on applicability of the impedance spectroscopy for characterization of materials and substances

Annus, Paul; Land, Raul; Min, Mart; Reidla, Marko; Rist, Marek I2MTC 2016 : 2016 IEEE International Instrumentation and Measurement Technology Conference : May 23–26, 2016, Taipei International Convention Center, Taipei, Taiwan : proceedings 2016 / p. 1052–1057 : ill <https://doi.org/10.1109/I2MTC.2016.7520513> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

On-Desk Model-Based Study for Evaluating the Effect of Squeezing the Arteries in the Forearm on the Bioimpedance and Pressure of Blood

Metshein, Margus; Annus, Paul; Land, Raul; Rist, Marek; Min, Mart; Lotamõis, Kristina; Märtens, Olev Journal of sensors 2023 / art. 5710835 <https://doi.org/10.1155/2023/5710835> [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** NDT & E International 2025 / art. 103265 <https://doi.org/10.1016/j.ndteint.2024.103265>

Phase-increment sampling in chirp signal based impedance measurements

Märtens, Olev; Min, Mart; Land, Raul; Ojarand, Jaan; Rist, Marek Sampling Theory and Applications 2017 : 12th International Conference : Tallinn, Estonia, July 3–7 : program and abstracts 2017 / p. 65

Phase-increment sampling in chirp signal based impedance measurements [Electronic resource]

Märtens, Olev; Min, Mart; Land, Raul; Ojarand, Jaan; Rist, Marek 2017 International Conference on Sampling Theory and

Applications (SampTA) : 12th International Conference : Tallinn, Estonia, July 3-7 : [abstracts] 2017 / p. 66. [USB]

Phase-increment sampling in chirp signal based impedance measurements [Online resource]

Märtens, Olev; Min, Mart; Land, Raul; Ojarand, Jaan; Rist, Marek 2017 International Conference on Sampling Theory and Applications (SampTA) : 12th International Conference : Tallinn, Estonia, July 3-7 : [proceedings] 2017 / p. 604-608 : ill
<https://doi.org/10.1109/SAMPTA.2017.8024393>

Piccolo-stick and pcb-coil based simple coin validator

Reidla, Marko; Märtens, Olev; Land, Raul; Rist, Marek EDERC 2012 : proceedings of the 5th European DSP in Education & Research Conference : 13-14 September 2012, Amsterdam, The Netherlands 2012 / p. 81-84
<https://ieeexplore.ieee.org/document/6532230>

Precise eddy current impedance measurement of metal plates

Märtens, Olev; Gordon, Rauno; Rist, Marek; Min, Mart; Pokatilov, Andrei; Kolyshkins, A. Lecture notes on impedance spectroscopy : measurement, modeling and applications. Vol. 1 2011 / p. 43-45
<https://www.taylorfrancis.com/chapters/edit/10.1201/b11339-10/precise-eddy-current-impedance-measurement-metal-plates-m%C3%A4rtens-gordon-rist-min-pokatilov-kolyshkins>

Precise eddy current measurements : improving accuracy of determininig of electrical conductivity of metal plates

Märtens, Olev; Land, Raul; Gordon, Rauno; Min, Mart; Rist, Marek; Pokatilov, Andrei Lecture notes on impedance spectroscopy : measurement, modeling and applications. Vol. 4 2014 / p. 109-115 : ill

Principles for the design of impedance spectroscopy devices for identification of dynamic bio-systems = Dünaamiliste biosüsteemide impedantsspektroskoopia seadmete disaini printsiibid

Rist, Marek 2018 <https://digi.lib.ttu.ee/i/?9260> https://www.eester.ee/record=b4759867*est

QUADRA impedance spectroscopy devices for dynamic measurements of bio-objects

Rist, Marek; Reidla, Marko; Märtens, Olev; Min, Mart; Annus, Paul; Land, Raul; Parve, Toomas 34th Annual International IEEE EMBS Conference : August 28 - September 1, 2012, Hilton Bayfront Hotel in San Diego, California, USA : abstracts 2012 / p. 557 : ill

Realization and evaluation of the device for measuring the impedance of human body for detecting the respiratory and heart rate

Metshein, Margus; Parve, Toomas; Annus, Paul; Rist, Marek; Min, Mart Elektronika ir elektrotehnika = Electronics and electrical engineering 2017 / p. 36-42 : ill <https://doi.org/10.5755/j01.eie.23.3.18330> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Smart sensor systems using impedance spectroscopy

Tränkler, Hans-Rolf; Kanoun, Olfa; **Min, Mart; Rist, Marek** Proceedings of the Estonian Academy of Sciences. Engineering 2007 / 4, p. 455-478 : ill

TMS320F28069-based impedance spectroscopy with binary excitation

Rist, Marek; Reidla, Marko; Min, Mart; Parve, Toomas; Märtens, Olev; Land, Raul EDERC 2012 : proceedings of the 5th European DSP in Education & Research Conference : 13-14 September 2012, Amsterdam, The Netherlands 2012 / p. 217-220
<https://ieeexplore.ieee.org/document/6532258>

Wearable data acquisition system of multimodal physiological signals for personal health care

Annus, Paul; Samiepour, Ali; Rist, Marek; Ruiso, Indrek; Krivošei, Andrei; Land, Raul; Parve, Toomas; Min, Mart pHealth 2013 : proceedings of the 10th International Conference on Wearable Micro and Nano Technologies for Personalized Health : June 26-28, 2013, Tallinn, Estonia 2013 / p. 107-112 : ill <https://doi.org/10.3233/978-1-61499-268-4-107> [Journal metrics at Scopus](#) [Article at Scopus](#)