

Aspects of using chirp excitation for estimation of bioimpedance spectrum

Paavle, Toivo; Min, Mart; Parve, Toomas Fourier transform - signal processing 2012 / p. 237-256 : ill

https://www.researchgate.net/publication/224830116_Aspects_of_Using_Chirp_Excitation_for_Estimation_of_Bioimpedance_Spectrum

Binary signals in impedance spectroscopy

Min, Mart; Ojarand, Jaan; Märtsens, 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 monitoring of tissue transplants

Min, Mart; Annus, Paul; Land, Raul; Paavle, Toivo; Haldre, Eero; Ruus, Rein Proceedings of the 24th IEEE Instrumentation and

Measurement Technology Conference IMTC 2007 : Warsaw, Poland, May 1-3, 2007 2007 / [4] p

Bioimpedance monitoring with improved accuracy using three-level stimulus

Paavle, Toivo; Annus, Paul; Kuusik, Alar; Land, Raul; Min, Mart Proceedings of European Conference on Circuit Theory and

Design 2007 (ECCTD'07) : Seville, Spain, August 26-30, 2007 2007 / p. 412-415

Broadband discrete-level excitations for improved extraction of information in bioimpedance measurements

Min, Mart; Paavle, Toivo Physiological measurement 2014 / p. 997-1010 : ill <https://doi.org/10.1088/0967-3334/35/6/997> [Journal](#)

[metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article of WOS](#)

Broadband spectroscopy of a dynamic impedance

Min, Mart; Land, Raul; Paavle, Toivo; Parve, Toomas; Annus, Paul Journal of physics : conference series 2010 / 1, p. 012109

Broadband spectroscopy of dynamic impedances with short chirp pulses

Min, Mart; Land, Raul; Paavle, Toivo; Parve, Toomas; Annus, Paul; Trebbels, Dennis Physiological measurement 2011 / p. 945-

958 : ill

Design of bioimpedance measurement system using direct carrier compensation

Annus, Paul; Lamp, Jürgen; Min, Mart; Paavle, Toivo Proceedings of the European Conference on Circuit Theory and Design :

ECCTD'05 : Cork, Ireland, Aug. 29 - Sept. 02, 2005. Vol. III 2005 / p. 23-26 <https://ieeexplore.ieee.org/document/1523051>

Deviation extension problems and nonlinear effects in the phase locked loop frequency demodulators

Min, Mart; Männama, Vello; Paavle, Toivo Proceedings of the Estonian Academy of Sciences. Engineering 2000 / 2, p. 120-134 :

ill https://artiklid.elnet.ee/record=b1004042*est

Device and method for monitoring bioimpedance of tissue transplants

Annus, Paul; Haldre, Eero; Kuusik, Alar; Land, Raul; Min, Mart; Paavle, Toivo; Parve, Toomas Info- ja

kommunikatsioonitehnoloogia doktorikooli IKTDK teise aastakonverentsi artiklite kogumik : 11.-12. mai 2007, Viinistu

kunstimuuseum 2007 / lk. 140-143 : ill

Digital simulation of analog phase locked loops

Min, Mart; Paavle, Toivo; Kiive, Rein Automation, simulation & measurement. Section A, Automation. Section M, Measurement :

3rd biennial conference : Tallinn, Estonia, October 7-11, 1991 = Automatiseerimine, modelleerimine ja mõõtmine : 3. rahvusvaheline

konverents / Tallinna Tehnikaülikool 1992 / p. 135-150: ill https://www.ester.ee/record=b1064034*est

Discrete-level broadband excitation signals : binary/ternary chirps

Paavle, Toivo; Min, Mart Elektronika ir elektrotehnika = Electronics and electrical engineering 2012 / p. 23-26 : ill

<https://eejournal.ktu.lt/index.php/elt/article/view/1815>

Hüvasti, halduskogud!

Paavle, Toivo Eesti Päevaleht 1999 / 6. apr., lk. 6

Hüve kogu linnale : [kanalisatsiooni rajamisest]

Paavle, Toivo Eesti Päevaleht 1999 / 27. sept., lk. 6

Improved extraction of information in bioimpedance measurements

Min, Mart; Paavle, Toivo 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. 78 : ill [https://doi.org/10.1088/1742-](https://doi.org/10.1088/1742-6596/434/1/012029)

[6596/434/1/012029](#) [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Kelle mure? : [Maardu-Miiduranna raudteeäärse ala ligipääsmatus võib õnnetuse korral saada saatuslikuks Merivälja ja Viimsi elukeskkonnale]

Paavle, Toivo Postimees 2004 / 19. juuni, lk. 12

Kius ja/või kurjus

Paavle, Toivo Eesti Päevaleht 1998 / 5. apr., lk. 4

Kodanik saab ametniku pärast karistada

Paavle, Toivo Maaleht 1998 / 29. jaan., lk. 12 https://artiklid.elnet.ee/record=b1753587*est

Kompromissivõimalus kruntide erastamisel

Paavle, Toivo Eesti Päevaleht 1996 / 31. jaan. Ärioleht, lk. 2 https://artiklid.elnet.ee/record=b1842046*est

Kruntide erastamisel tuleks järgida kolme printsiipi

Paavle, Toivo Eesti Päevaleht 1996 / 10. apr. Ärioleht, lk. 4

Limitations in using additional delays for linearity improvement of phase-frequency detectors

Paavle, Toivo Raadiotehnika 2001 : VIII rahvusvahelise telekommunikatsioonipäeva materjalid 2001 / lk. 115-120 : ill

Linearity and stability analysis of a class of phase-frequency detectors

Männama, Vello; Paavle, Toivo Iranian journal of electrical and computer engineering 2002 / 1, p. 51-53

Linearity restrictions for a class of phase frequency detectors

Männama, Vello; Paavle, Toivo Proceedings of the Estonian Academy of Sciences. Engineering 2001 / 4, p. 331-346 : ill

Low-energy chirps for bioimpedance measurement

Paavle, Toivo; Min, Mart; Trebbels, Dennis 34th International Conference on Telecommunications and Signal Processing (TSP) : Budapest, Hungary, August 18-20, 2011 : [proceedings] 2011 / p. 398-402 : ill

Magistripaberitega valveelektriku vaatevinkel : [intervjuu Toivo Paavlega]

Sild, Ants; **Paavle, Toivo** Autoleht 2000 / nr. 10, 18. mai : fot

Majaomanikud alustasid surveavaldusi

Paavle, Toivo Postimees 1997 / 29. dets., lk. 10

Method for synchronous sampling in multifrequency bioimpedance measurements

Min, Mart; Parve, Toomas; Annus, Paul; Paavle, Toivo Proceedings of the 23rd IEEE Instrumentation and Measurement Technology Conference (IMTC/06) : Sorrento, Italy, 24-27 April, 2006 2006 / p. 1699-1703

Method of synchronous undersampling for complex bioimpedance measurement system

Min, Mart; Paavle, Toivo Proceedings of European Conference on Circuit Theory and Design : ECCTD'03 : September 1-4, 2003, Cracow, Poland 2003 / p. 302-305

Modeling in the bioimpedance measurement techniques using general-purpose software

Paavle, Toivo BEC 2006 : 2006 International Baltic Electronics Conference : Tallinn University of Technology, October 2-4, 2006, Tallinn, Estonia : proceedings of the 10th Biennial Baltic Electronics Conference 2006 / p. 209-212 : ill

Modeling of the PLL-based bioimpedance measurement system

Paavle, Toivo; Min, Mart BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia 2004 / p. 183-186 : ill

Modelling, design and test of a bioimpedance measurement system with carrier compensation

Annus, Paul; Lamp, Jürgen; Min, Mart; Paavle, Toivo Proceedings of the 46th RTU Scientific Conference : Riga, Latvia, 13-14 October, 2005 2005 / p. 22-25

Multisine and binary multifrequency waveforms in impedance spectrum measurement : a comparative study

Annus, Paul; Min, Mart; Ojarand, Jaan; Paavle, Toivo; Land, Raul; Ellervee, Peeter; Parve, Toomas 5th European Conference of the International Federation for Medical and Biological Engineering : 14-18 September 2011, Budapest, Hungary 2012 / p. 1265-1268 https://link.springer.com/chapter/10.1007/978-3-642-23508-5_327

Muretud ametnikud : [linnaametnike palkadest]

Paavle, Toivo Eesti Päevaleht 1998 / 8. dets., lk. 6

On deviation restrictions in PLL frequency demodulators

Min, Mart; Männama, Vello; Paavle, Toivo BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings 1998 / p. 93-96: ill

Parametric optimization of the acquisition time of PLL frequency synthesizers

Paavle, Toivo Telekommunikatsioon 2002 : IX rahvusvahelise telekommunikatsioonipäeva materjalid 2002 / lk. 24-30 : ill

Parteitu ülistus parteile

Paavle, Toivo Eesti Päevaleht 1998 / 16. apr., lk. 6

Phase insensitivity in the charge pump phase locked loops

Paavle, Toivo Elektroonika 2000 : VII rahvusvahelise telekommunikatsioonipäeva konverentsi ettekannete materjalid 2000 / p. 78-86
: ill https://www.ester.ee/record=b1399956*est

Phase-domain modeling of the PLL frequency synthesizers

Paavle, Toivo BEC 2002 : proceedings of the 8th Biennial Baltic Electronics Conference : October 6-9, 2002, Tallinn, Estonia 2002 / p. 173-176 : ill

Phase-frequency detector modeling for the PLL applications

Männama, Vello; Paavle, Toivo The 7th Biennial Conference on Electronics and Microsystem Technology "Baltic Electronics Conference" : BEC 2000 : October 8 - 11, 2000, Tallinn, Estonia : conference proceedings 2000 / p. 119-122 : ill

PLL-based measurement of bioimpedance using undersampling

Min, Mart; Paavle, Toivo Proceedings of the XII International Conference on Electrical Bioimpedance & the V Conference on Electrical Impedance Tomography : ICEB/EIT 2004 : June 20-24, 2004, Gdansk, Poland. Vol. 2 2004 / p. 347-350

Pridurkade keskkonna igavikulisus : [privilegeeritud ametnikkonnast]

Paavle, Toivo KesKus 2001 / 3. märts, lk. 6 : portr

Raamatukogu likvideerimisest : [Merivälja raamatukogust]

Paavle, Toivo Eesti Päevaleht 1998 / 3. nov., lk. 6

Rahvuslikud lootused ja tegelikkus

Paavle, Toivo Eesti Päevaleht 1996 / 17. apr., lk. 2

Rectangular wave excitation in wideband bioimpedance spectroscopy

Min, Mart; Paavle, Toivo; Annus, Paul; Land, Raul IEEE International Workshop on Medical Measurements and Applications : MeMeA2009 : Cetraro, Italy, May 29-30, 2009 2009 / p. 268-271

Retangular-wave chirps for broadband measurement : spectra and energy

Paavle, Toivo; Min, Mart BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 195-198 : ill

Settling time minimization in PLL frequency synthesizers

Min, Mart; Männama, Vello; Paavle, Toivo ICCSC'02 : 1st IEEE International Conference on Circuits and Systems for Communications, 26-28 June, 2002, St.Petersburg, Russia : proceedings 2002 / p. 366-369 : ill
<https://ieeexplore.ieee.org/document/1029117>

Short-time chirp excitation for wideband identification of dynamic objects

Paavle, Toivo Estonian journal of engineering 2011 / 2, p. 169-179 : ill

Short-time chirp excitations for using in wideband characterization of objects: an overview

Paavle, Toivo; Min, Mart; Ojarand, Jaan; Parve, Toomas BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 253-256 : ill

Signal distortion and waveform conversion in a classical PLL

Min, Mart; Männama, Vello; Paavle, Toivo Proceedings of the European Conference on Circuit Theory and Design ECCTD'99 : August 29-September 2, 1999, Stresa, Italy 1999 / p. 127-130

Signal distortion in the phase locked loop

Paavle, Toivo Ringhääling '99 : VI Rahvusvahelise Telekommunikatsioonipäeva konverentsi ettekannete materjalid 1999 / lk. 95-98 : ill

Simulation of the phase locked loops

Paavle, Toivo Telekommunikatsioon '98 : rahvusvahelise telekommunikatsioonipäeva konverentsi ettekannete materjalid, 15. mai 1998 1998 / lk. 73-78 : ill

Sooduserastamise vastaste põhimõtted on arusaamatud

Paavle, Toivo Eesti Päevaleht 1996 / 17. jaan. Ärileht, lk. 3

Synchronous sampling and demodulation in an instrument for multifrequency bioimpedance measurement

Min, Mart; Parve, Toomas; Ronk, Ants; Annus, Paul; Paavle, Toivo IEEE transactions on instrumentation and measurement 2007 / 4, p. 1365-1372 : ill <https://ieeexplore.ieee.org/document/4277035>

System level modeling of phase locked loops : behavioral analysis and parameterization

Paavle, Toivo 2009 https://www.ester.ee/record=b1809261*est

System level modeling of phase locked loops : behavioral analysis and parameterization

Paavle, Toivo 2003 https://www.ester.ee/record=b1809261*est

Theoretical development and computer simulation of a bioimpedance measurement system

Paavle, Toivo Proceedings of the Estonian Academy of Sciences. Engineering 2004 / 3, p. 198-208

Time-domain manipulating of short-time chirps

Paavle, Toivo; Min, Mart BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 129-132 : ill

Time-frequency analysis of biological matter using short-time chirp excitation

Min, Mart; Paavle, Toivo; Ojarand, Jaan 2011 20th European Conference on Circuit Theory and Design (ECCTD) : Linköping, Sweden, August 29-31, 2011 : proceedings 2011 / p. 298-301 : ill <https://ieeexplore.ieee.org/document/6043345>

Using of chirp excitation for bioimpedance estimation : theoretical aspects and modeling

Paavle, Toivo; Min, Mart; Parve, Toomas BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 325-328 : ill

Wideband object identification with rectangular wave chirp excitation

Paavle, Toivo; Min, Mart; Annus, Paul; Birjukov, Andrei; Land, Raul; Parve, Toomas ECCTD'09 : European Conference on Circuit Theory and Design 2009 : Antalya, Turkey, August 23-27, 2009 2009 / p. 421-424 <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=5275007>

Viirusekandja mõtteid

Paavle, Toivo Eesti Päevaleht 1998 / 5. mai, lk. 6

Äri ärasolkimisest : [odavate noorperekodude rajamisest : vastukaja artiklile Eesti Päevalehes 28.06.2000]

Paavle, Toivo Eesti Päevaleht 2000 / 10. juuli, lk. 6

Ühele maksuparadiis, teisele põrgu : [maamaksust]

Paavle, Toivo Eesti Päevaleht 1999 / 19. nov., lk. 6: ill

Динамический синтез системы ФАП третьего порядка

Kiive, Rein; Min, Mart; Paavle, Toivo Тезисы докладов республиканской научно-технической конференции, посвященной Дню радио. [1], Секция: Информационно-измерительная техника 1981 / с. 9-10 : ил https://www.ester.ee/record=b1310782*est

Моделирование детерминированной системы ФАПЧ на АВМ

Min, Mart; Paavle, Toivo Труды по электротехнике и автоматике : сборник статей. 13 1975 / с. 67-71 : илл https://www.ester.ee/record=b2190710*est <https://digikogu.taltech.ee/et/Item/ffbd63ed-06d6-4bbb-9468-118f743cc87f>

Определение полосы затягивания системы ФАПЧ второго порядка

Min, Mart; Paavle, Toivo Труды по электротехнике и автоматике : сборник статей. 13 1975 / с. 73-77 : илл https://www.ester.ee/record=b2190710*est <https://digikogu.taltech.ee/et/Item/ffbd63ed-06d6-4bbb-9468-118f743cc87f>

Определение полосы однопериодного захвата системы ФАП третьего порядка

Min, Mart; Paavle, Toivo Расчет и проектирование приборов, устройств и систем технической кибернетики 1980 / с. 125-132 : илл https://www.ester.ee/record=b1281890*est <https://digikogu.taltech.ee/et/Item/8e0abfe2-9020-4ebd-85d1-fd67de0d1b30>