

Vectorcardiography

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Recent Publications on Vectorcardiography:

- [Ionic mechanisms and vectorial model of early repolarization pattern in the surface electrocardiogram of the athlete.](#)
*BACKGROUND: The electrocardiogram (ECG) of the athlete displays particular...*25th October, 2008
Department of Cardiology, State University of Rio de Janeiro, Rio de- Ann Noninvasive Electrocardiol. 2008 Jul;13(3):301-7. ([DOI Direct Link](#))
- [Elevated blood pressure and electrocardiographic frontal T axis and spatial QRS-T angle changes in postmenopausal women.](#)
*INTRODUCTION: Frontal T axis and spatial QRS-T angle are both measures of...*22nd August, 2008
Julius Center for Health Sciences and Primary Care, University Medical- J Electrocardiol. 2008 Jul-Aug;41(4):360-4. Epub 2008 Mar 19. ([DOI Direct Link](#))
- [Non-invasive diagnosis of coronary artery disease using cardiogoniometry performed at rest.](#)
*PRINCIPLES: Cardiogoniometry is a non-invasive technique for quantitative...*13th August, 2008
Department of Cardiology, University Hospital, Inselspital, Bern,- Swiss Med Wkly. 2008 Apr 19;138(15-16):230-8. ([DOI Direct Link](#))
- [Improved artifact correction for combined electroencephalography/functional MRI by means of synchronization and use of vectorcardiogram recordings.](#)
*PURPOSE: To demonstrate that two methodological developments...*28th June, 2008
Sir Peter Mansfield Magnetic Resonance Centre, School of Physics and- J Magn Reson Imaging. 2008 Mar;27(3):607-16. ([DOI Direct Link](#))
- [Improved ECG detection of presence and severity of right ventricular pressure load validated with cardiac magnetic resonance imaging.](#)
*The study aimed to assess whether the 12-lead ECG-derived ventricular...*13th June, 2008
Cardiology Department, Leiden University Medical Center, Leiden, The- Am J Physiol Heart Circ Physiol. 2008 May;294(5):H2150-7. Epub 2008 Feb ([DOI Direct Link](#))
- [On designing and testing transformations for derivation of standard 12-lead/18-lead electrocardiograms and vectorcardiograms from reduced sets of predictor leads.](#)
*The aim of this study was to develop and evaluate transformation...*29th May, 2008
Faculty of Medicine, Dalhousie University, Halifax, NS, Canada.- J Electrocardiol. 2008 May-Jun;41(3):220-9. ([DOI Direct Link](#))
- [Signs of myocardial ischaemia after injection of oxytocin: a randomized double-blind comparison of oxytocin and methylergometrine during Caesarean section.](#)
*BACKGROUND: ECG changes, similar to those seen during myocardial...*14th May, 2008
Department of Thoracic Anaesthesiology, Umea University Hospital, SE-901- Br J Anaesth. 2008

- May;100(5):683-9. Epub 2008 Apr 2. ([DOI Direct Link](#))
- [Spatial characteristics of atrial fibrillation electrocardiograms.](#)
*BACKGROUND: The present study investigates spatial properties of atrial...*17th April, 2008
 Signal Processing Group, Department of Electrical and Information- J Electrocardiol. 2008
 Mar-Apr;41(2):165-72. ([DOI Direct Link](#))
 - [\[Changes in parameters of orthogonal ECG in hypertensive patients given combined antihypertensive treatment\]](#)
*AIM: To evaluate changes in parameters of orthogonal ECG in hypertensive...*2nd April, 2008
 - Ter Arkh. 2008;80(1):38-40.
 - [Spatial dynamics of atrial activity assessed by the vectorcardiogram: from sinus rhythm to atrial fibrillation.](#)
*AIM: This study aims at developing methods for extracting spatiotemporal...*1st April, 2008
 Ecole Polytechnique Federale de Lausanne, Signal Processing Institute,- Europace. 2007 Nov;9 Suppl
 6:vi109-18. ([DOI Direct Link](#))
 - [Incidence of ventricular fibrillation during left coronary arteriography in pigs: comparison of a solution of the nonionic dimer iodixanol with solutions of five different nonionic monomers.](#)
*BACKGROUND: Solutions of iodine contrast media (CM) used for selective...*28th March, 2008
 Department of Diagnostic Radiology and Department of Experimental- Acta Radiol. 2008
 Mar;49(2):150-6. ([DOI Direct Link](#))
 - [Contributions of myocardial ischemia and heart rate to ST segment changes in patients with or without coronary artery disease.](#)
*BACKGROUND: ST changes related to ischemia at different heart rates (HRs)...*5th March, 2008
 Heart Centre, University- Acta Anaesthesiol Scand. 2008 Feb;52(2):219-28. Epub 2007 Nov 12. ([DOI Direct Link](#))
 - [Right ventricular pacing-induced electrophysiological remodeling in the human heart and its relationship to cardiac memory.](#)
*BACKGROUND: Right ventricular apical (RVA) pacing induces...*7th February, 2008
 Department of Cardiology, Karolinska Institutet at Karolinska University- Heart Rhythm. 2007
 Dec;4(12):1477-86. Epub 2007 Aug 11. ([DOI Direct Link](#))
 - [Derivation of orthogonal leads from the 12-lead electrocardiogram. Performance of an atrial-based transform for the derivation of P loops.](#)
*The objective of this study was the evaluation of the accuracy of Dower...*5th February, 2008
 Department of Electrical Engineering and Computer Science, Northwestern- J Electrocardiol. 2008
 Jan-Feb;41(1):19-25. Epub 2007 Sep 21. ([DOI Direct Link](#))
 - [The fathers of the International Vectorcardiographic Colloquia.](#)
*The objective of this study was the evaluation of the accuracy of Dower...*13th December, 2007
 Institute of Normal and Pathological Physiology, Slovak Academy of- J Electrocardiol. 2007
 Nov-Dec;40(6):539-41. Epub 2007 Sep 19. ([DOI Direct Link](#))

Vectorcardiography Patents:



- 4106495- [Vectorcardiographic method for ambulatory patients](#)
- 5458116- [Display system and method for three-dimensional vectorcardiograms](#)
- 5500008- [Method and apparatus for delivering defibrillation shocks with improved effectiveness](#)

- 5531767- [Method and apparatus for delivering defibrillation shocks with improved effectiveness](#)
- 5560370- [Method and apparatus for prediction of cardiac electrical instability by simultaneous assessment of T-wave alternans and QT interval dispersion](#)
- 5711304- [Signal processing apparatus and method for adding additional chest leads to the 12-lead electrocardiogram without additional electrodes](#)
- 5749901- [Method and apparatus for delivering defibrillation shocks with improved effectiveness](#)
- 5807268- [Disposable sensing device with contaneous conformance](#)
- 5827195- [Electrocardiogram noise reduction using multi-dimensional filtering](#)
- 5842997- [Non-invasive, dynamic tracking of cardiac vulnerability by simultaneous analysis of heart rate variability and T-wave alternans](#)
- 5853426- [Method and apparatus for delivering atrial defibrillation therapy with improved effectiveness](#)
- 5437285- [Method and apparatus for prediction of sudden cardiac death by simultaneous assessment of autonomic function and cardiac electrical stability](#)
- 5365937- [Disposable sensing device with contaneous conformance](#)
- 4121576- [Method and apparatus for processing vectorcardiographic signals for enabling quantitative determination of the percentage of heart muscle tissue affected by an intervention](#)
- 4175337- [Apparatus for assisting the understanding of electro-cardiography and vector-cardiography](#)
- 4267576- [Interconnection system for a biological waveform simulator device](#)
- 4352163- [Vectorcardiogram simulator](#)
- 4850370- [Method and apparatus for sensing and analyzing electrical activity of the human heart](#)
- 5054496- [Method and apparatus for recording and analyzing body surface electrocardiographic peak maps](#)
- 5058598- [Method and apparatus for synthesizing leads of an electrocardiogram](#)
- 5127401- [Method of and apparatus for multi-vector pacing artifact detection](#)
- 5265617- [Methods and means for non-invasive, dynamic tracking of cardiac vulnerability by simultaneous analysis of heart rate variability and T-wave alternans](#)
- 5331960- [Evaluation method for EKG mapping](#)
- 5913829- [Sensing device for acoustic energy](#)
- 5921940- [Method and apparatus for using physiologic stress in assessing myocardial electrical stability](#)
- 6038469- [Myocardial ischemia and infarction analysis and monitoring method and apparatus](#)
- 6920350- [Method of and apparatus for displaying and analyzing a physiological signal](#)
- 6922584- [Method and apparatus for discrimination atrial fibrillation using ventricular rate detection](#)
- 6975900- [Systems and methods for determining a surface geometry](#)
- 7016719- [System and methods for noninvasive electrocardiographic imaging \(ECGI\) using generalized minimum residual \(GMRes\)](#)
- 7031765- [Algorithms for detecting atrial arrhythmias from discriminatory signatures of ventricular cycle lengths](#)
- 7123954- [Method for classifying and localizing heart arrhythmias](#)
- 7139610- [Capture management in multi-site pacing](#)
- 7184821- [Monitoring thoracic fluid changes](#)
- 7194299- [Differentiating ischemic from non-ischemic T-wave inversion](#)
- 7231249- [Methods, apparatus, and systems for multiple stimulation from a single stimulator](#)
- 6920349- [System and method for predicting the onset of cardiac pathology using fractal analysis](#)
- 6901285- [System and method for synthesizing leads of an electrocardiogram](#)
- 6049730- [Method and apparatus for improving the accuracy of interpretation of ECG-signals](#)
- 6052615- [Method and apparatus for sensing and analyzing electrical activity of the human heart using a four electrode arrangement](#)
- 6358214- [ECG scanner](#)
- 6424860- [Myocardial ischemia and infarction analysis and monitoring method and apparatus](#)
- 6496720- [Process for sensing and analyzing electrical activity of the human heart utilizing one lead system with an egg monitor designed for use with another lead system](#)
- 6754523- [Method of analysis of the electrocardiogram](#)
- 6760615- [Method and apparatus for discriminating between tachyarrhythmias](#)

- 6766190- [Method and apparatus for developing a vectorcardiograph in an implantable medical device](#)
- 6772004- [System and method for non-invasive electrocardiographic imaging](#)
- 6804550- [Method and apparatus for frank lead reconstruction from derived chest leads](#)
- 7266408- [Device and procedure for visual three-dimensional presentation of ECG data](#)

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