

## Assoc. Prof. YEŐİM SERİNAĖAOĖLU DOĖRUSÖZ

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: D-3666-2011

ScopusID: 6506978932

Yoksis Researcher ID: 114561

### Education Information

Doctorate, Northeastern University, United States Of America 1998 - 2003

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Elektrik Ve Elektronik Mühendisliđi (YI) (Tezli), Turkey 1995 - 1997

Undergraduate, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliđi Bölümü, Turkey 1991 - 1995

### Dissertations

Doctorate, Application of Bayesian Methods to Electrocardiography, Northeastern University, 2003

Postgraduate, Modeling and Spectral Analysis of T-Wave Alternans Time Series in the Electrocardiogram, Middle East Technical University, Graduate School of Natural and Applied Sciences, Elektrik Ve Elektronik Mühendisliđi (YI) (Tezli), 1997

### Research Areas

Biomedical Engineering, Biomedical Image Processing, Biosignal Processing, Electrical and Electronics Engineering, Engineering and Technology

### Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Electrical and Electronics Engineering, 2020 - Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Electrical and Electronics Engineering, 2018 - 2020

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Electrical and Electronics Engineering, 2004 - 2018

## Advising Theses

- Serinağaoğlu Doğrusöz Y., Solving the inverse problem of electrocardiography for spontaneous pvc localization: Analysis of clinical electrocardiographic data, Postgraduate, N.RASOOLZADEH(Student), 2023
- Serinağaoğlu Doğrusöz Y., Improvement of electrocardiographic imaging reconstructions: A physics-guided ai approach and an efficient method for training data reduction, Postgraduate, K.UĞURLU(Student), 2023
- HALICI U., SERİNAĞAOĞLU DOĞRUSÖZ Y., Classification of lung nodules in CT images using convolutional neural networks, Postgraduate, G.POLAT(Student), 2018
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Adaptive multivariate solution schemes for inverse electrocardiography problem, Doctorate, Ö.NAZIM(Student), 2018
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Comparison of ML and MAP parameter estimation techniques for the solution of inverse electrocardiography problem, Postgraduate, T.ERENLER(Student), 2018
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Reduction of false arrhythmia alarms on patient monitoring systems in intensive care units by using fuzzy logic algorithms, Postgraduate, E.YANAR(Student), 2018
- SERİNAĞAOĞLU DOĞRUSÖZ Y., A new MEMS approach for spirometers, Postgraduate, S.HABIBIABAD(Student), 2016
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Forward problem of electrocardiography in terms of 3D transmembrane potentials using comsol, Postgraduate, G.BEDİR(Student), 2015
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Design and implementation of an ECG front end circuit /, Postgraduate, M.ROBAEI(Student), 2015
- SERİNAĞAOĞLU DOĞRUSÖZ Y., A novel method for the quantification of coronary artery stenosis: A 2d QCA system, Postgraduate, M.DEMİRAY(Student), 2015
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Body surface lead reduction algorithm and its use in inverse problem of electrocardiography, Postgraduate, F.GHARBALCHI(Student), 2015
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Simulation of transmembrane potential propagation in three dimensional ventricular tissue using Aliev Panfilov model, Postgraduate, M.SEYEDBRAHIMI(Student), 2015
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Comparison of five regularization methods for the solution of inverse electrocardiography problem, Postgraduate, A.GÜÇLÜ(Student), 2013
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Comparison of five regularization methods for the inverse electrocardiography problem, Postgraduate, A.Güçlü(Student), 2013
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Implement of three segmentation algorithms for CT images of torso, Postgraduate, S.Öz(Student), 2011
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Implementation of three segmentation algorithms for CT images of torso, Postgraduate, S.ÖZ(Student), 2011
- SERİNAĞAOĞLU DOĞRUSÖZ Y., ÇİLOĞLU T., Detection of post apnea sounds and apnea periods from sleep sounds, Postgraduate, E.KARCI(Student), 2011
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Use of genetic algorithm for selection of regularization parameters in multiple constraint inverse ECG problem, Postgraduate, A.MAZLOUMI(Student), 2011
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Solution of inverse electrocardiography problem using minimum relative entropy method, Postgraduate, A.BİRCAN(Student), 2010
- TÖNÜK E., SERİNAĞAOĞLU DOĞRUSÖZ Y., A cellular automaton based electromechanical model of the heart, Postgraduate, C.BORA(Student), 2010
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Combination of conventional regularization methods and genetic algorithms for solving the inverse problem of electrocardiography, Postgraduate, S.SARIKAYA(Student), 2010
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Solution of inverse problem of electrocardiography using state space models, Postgraduate, Ü.AYDIN(Student), 2009
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Detection and classification of QRS complexes from the ECR recordings, Postgraduate, B.KOÇ(Student), 2008
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Detection and classification of qrs complexes from the ecg recordings, Postgraduate, B.Koç(Student), 2008
- SERİNAĞAOĞLU DOĞRUSÖZ Y., Evaluation of spatial and spatio-temporal regularization approaches in inverse problem of electrocardiography, Postgraduate, M.ÖNAL(Student), 2008
- SERİNAĞAOĞLU DOĞRUSÖZ Y., An efficient and fast method of snore detection for sleep disorder investigation,

Postgraduate, M.ÇAVUŞOĞLU(Student), 2007

SERİNAĞAOĞLU DOĞRUSÖZ Y., An efficient fast method of snore detection for sleep disorder investigation, Postgraduate, M.Çavuşoğlu(Student), 2007

SERİNAĞAOĞLU DOĞRUSÖZ Y., Removal of baseline wandering from the electrocardiogram, Postgraduate, V.TANRIVERDİ(Student), 2006

SERİNAĞAOĞLU DOĞRUSÖZ Y., Segmentation of torso CT images, Postgraduate, O.ALİ(Student), 2006

## Jury Memberships

Doctorate, Doctorate, Universidad Politecnica de Valencia, September, 2023

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Evaluation of five methods for the interpolation of bad leads in the solution of the inverse electrocardiography problem**  
Serinağaoğlu Doğrusöz Y., Bear L., Bergquist J., Rababah A., Good W., Stoks J., Svehlikova J., Van Dam E., Brooks D., Macleod R.  
Physiological measurement, vol.45, no.9, 2024 (SCI-Expanded)
- II. **Comparison of dipole-based and potential-based ECGI methods for premature ventricular contraction beat localization with clinical data**  
Serinağaoğlu Doğrusöz Y., Rasoolzadeh N., Ondrusova B., Hlivak P., Zelinka J., Tysler M., Svehlikova J.  
Frontiers in Physiology, vol.14, 2023 (SCI-Expanded)
- III. **Investigation into the importance of using natural PVCs and pathological models for potential-based ECGI validation**  
Bear L. R., Bergquist J. A., Abell E., Cochet H., MacLeod R. S., Dubois R., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
Frontiers in Physiology, vol.14, 2023 (SCI-Expanded)
- IV. **A Novel Data-Adaptive Regression Framework Based on Multivariate Adaptive Regression Splines for Electrocardiographic Imaging**  
Onak O. N., Erenler T., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
IEEE Transactions on Biomedical Engineering, vol.69, no.2, pp.963-974, 2022 (SCI-Expanded)
- V. **The effect of interpolating low amplitude leads on the inverse reconstruction of cardiac electrical activity**  
Rabah A. S., Bear L. R., Dogrusoz Y., Good W., Bergquist J., Stoks J., MacLeod R., Rjoob K., Jennings M., Mclaughlin J., et al.  
Computers in Biology and Medicine, vol.136, 2021 (SCI-Expanded)
- VI. **The Impact of Torso Signal Processing on Noninvasive Electrocardiographic Imaging Reconstructions**  
Bear L. R., Dogrusoz Y., Good W., Svehlikova J., Coll-Font J., Van Dam E., Macleod R.  
IEEE Transactions on Biomedical Engineering, vol.68, no.2, pp.436-447, 2021 (SCI-Expanded)
- VII. **Reduced leadset selection and performance evaluation in the inverse problem of electrocardiography for reconstructing the ventricularly paced electrograms**  
No F. G., Dogrusoz Y., Onak O. N., Weber G.  
Journal of Electrocardiology, vol.60, pp.44-53, 2020 (SCI-Expanded)
- VIII. **ML and MAP estimation of parameters for the Kalman filter and smoother applied to electrocardiographic imaging**  
Erenler T., Serinagaoglu D.  
MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.57, no.10, pp.2093-2113, 2019 (SCI-Expanded)
- IX. **Evaluation of multivariate adaptive non-parametric reduced-order model for solving the inverse electrocardiography problem: a simulation study**

- Onak O. N., Dogrusoz Y., Weber G. W.  
 MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.57, no.5, pp.967-993, 2019 (SCI-Expanded)
- X. **Effects of a priori parameter selection in minimum relative entropy method on inverse electrocardiography problem**  
 ONAK O. N., Dogrusoz Y., WEBER G. W.  
 INVERSE PROBLEMS IN SCIENCE AND ENGINEERING, vol.26, no.6, pp.877-897, 2018 (SCI-Expanded)
- XI. **The Development and Performance Characterization of Turbine Prototypes for a MEMS Spirometer**  
 GOREKE U., HABİBİABAD S., AZGIN K., Dogrusoz Y., Beyaz M. I.  
 IEEE SENSORS JOURNAL, vol.16, no.3, pp.628-633, 2016 (SCI-Expanded)
- XII. **Genetic algorithm-based regularization parameter estimation for the inverse electrocardiography problem using multiple constraints**  
 SERİNAĞAOĞLU DOĞRUSÖZ Y., Gavgani A. M.  
 MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.51, no.4, pp.367-375, 2013 (SCI-Expanded)
- XIII. **A Kalman filter-based approach to reduce the effects of geometric errors and the measurement noise in the inverse ECG problem**  
 Aydin U., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
 MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.49, no.9, pp.1003-1013, 2011 (SCI-Expanded)
- XIV. **Investigation of sequential properties of snoring episodes for obstructive sleep apnoea identification**  
 ÇAVUŞOĞLU M., ÇİLOĞLU T., Serinagaoglu Y., Kamaşak M. E., EROĞUL O., AKÇAM T.  
 PHYSIOLOGICAL MEASUREMENT, vol.29, no.8, pp.879-898, 2008 (SCI-Expanded)
- XV. **An efficient method for snore/nonsnore classification of sleep sounds**  
 Cavusoglu M., Kamasak M., Erogul O., Ciloglu T., Serinagaoglu Y., Akcam T.  
 PHYSIOLOGICAL MEASUREMENT, vol.28, no.8, pp.841-853, 2007 (SCI-Expanded)
- XVI. **Improved performance of Bayesian solutions for inverse Electrocardiography using multiple information sources**  
 SERİNAĞAOĞLU DOĞRUSÖZ Y., BROOKS D., MACLEOD R.  
 IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol.53, no.10, pp.2024-2034, 2006 (SCI-Expanded)
- XVII. **Bayesian solutions and performance analysis in bioelectric inverse problems**  
 Serinagaoglu Y., Brooks D., MacLeod R.  
 IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol.52, no.6, pp.1009-1020, 2005 (SCI-Expanded)
- XVIII. **Multielectrode venous catheter mapping as a high quality constraint for electrocardiographic inverse solution**  
 Serinagaoglu Y., MacLeod R., YILMAZ B., Brooks D.  
 JOURNAL OF ELECTROCARDIOLOGY, vol.35, pp.65-73, 2002 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Lanczos bidiagonalization-based inverse solution methods applied to electrical imaging of the heart by using reduced lead-sets: A simulation study**  
 GHARBALCHÍ F., Dogrusoz Y., Weber G. W.  
 COGENT MATHEMATICS, vol.3, 2016 (ESCI)
- II. **Noise reduction using anisotropic diffusion filter in inverse electrocardiology.**  
 Gavgani A. M., Dogrusoz Y.  
 Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference, pp.5919-5922, 2012 (Scopus)
- III. **Use of genetic algorithm for selection of regularization parameters in multiple constraint inverse ECG problem.**  
 Gavgani A. M., Dogrusoz Y.  
 Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology

Society. IEEE Engineering in Medicine and Biology Society. Conference, pp.985-988, 2011 (Scopus)

**IV. Detection of post apnea sounds and apnea periods from sleep sounds.**

Karci E., Dogrusoz Y., Ciloglu T.

Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference, pp.6075-6078, 2011 (Scopus)

## **Refereed Congress / Symposium Publications in Proceedings**

- I. Evaluation of Inverse Electrocardiography Solutions Based on Signal-Averaged Beats to Localize the Origins of Spontaneous Premature Ventricular Contractions in Humans**  
Serinağaoğlu Doğrusöz Y., Rasoolzadeh N., Ondrusova B., Hlivak P., Svehlikova J.  
Functional Imaging and Modeling of the Heart - 12th International Conference, FIMH 2023, Proceedings, Lyon, France, 19 - 22 June 2023, vol.13958 LNCS, pp.166-174
- II. Two Approaches for Inverse PVC Localization from Clinical ECG Data Using Heart Surface Potentials**  
Svehlikova J., Rasoolzadeh N., Ondrusova B., Hlivak P., Serinağaoğlu Doğrusöz Y.  
50th Computing in Cardiology, CinC 2023, Georgia, United States Of America, 1 - 04 October 2023
- III. Effects of Torso Inhomogeneities on Spontaneous PVC Localization in Potential and Dipole-Based Methods**  
Rasoolzadeh N., Ondrusova B., Serinağaoğlu Doğrusöz Y., Svehlikov J.  
14th International Conference on Measurement, MEASUREMENT 2023, Smolenice Castle, Slovakia, 29 - 31 May 2023, pp.2-5
- IV. Variability of Premature Ventricular Contraction Localization with Respect to Source and Forward Model Variation in Clinical Data**  
Rasoolzadeh N., Svehlikova J., Ondrusova B., Serinağaoğlu Doğrusöz Y.  
2022 Computing in Cardiology, CinC 2022, Tampere, Finland, 4 - 07 September 2022, vol.2022-September
- V. Comparison of Dipole-Based and Potential-Based Inverse ECG Solutions for the Localization of Ventricular Pacing Sites**  
Dogrusoz Y., Zelinka J., Svehlikova J.  
13th International Conference on Measurement, MEASUREMENT 2021, Virtual, Smolenice Castle, Slovakia, 17 - 19 May 2021, pp.106-109
- VI. Electrocardiographic Imaging of Sinus Rhythm in Pig Hearts Using Bayesian Maximum A Posteriori Estimation**  
Dogrusoz Y., Dubois R., Abell E., Cluitmans M., Bear L.  
2021 Computing in Cardiology, CinC 2021, Brno, Czech Republic, 13 - 15 September 2021, vol.2021-September
- VII. Compensation of Model Errors in Electrocardiographic Imaging Using Bayesian Estimation**  
Aldemir F., Dogrusoz Y.  
2021 Computing in Cardiology, CinC 2021, Brno, Czech Republic, 13 - 15 September 2021, vol.2021-September
- VIII. Use of Simulated Data for the Estimation of Prior Models in Kalman Filter-Based ECGI**  
Dogrusoz Y., Erenler T.  
Computing in Cardiology Conference (CinC), Rimini, Italy, 13 - 16 September 2020
- IX. Effects of Interpolation on the Inverse Problem of Electrocardiography**  
SERİNAĞAOĞLU DOĞRUSÖZ Y., Bear L., Bergquist J., Dubois R., Good W., MacLeod R. S., Rababah A.  
2019 Computing in Cardiology, CinC 2019, Singapore, Singapore, 8 - 11 September 2019
- X. Effects of Prior Data on the Inference and Filtering Based Electrocardiographic Imaging**  
Erenler T., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
2019 Computing in Cardiology, CinC 2019, Singapore, Singapore, 8 - 11 September 2019
- XI. Statistical estimation applied to electrocardiographic imaging**  
Dogrusoz Y.  
12th International Conference on Measurement, MEASUREMENT 2019, Smolenice, Slovakia, 27 - 29 May 2019, pp.2-9

- XII. **Reduction of Effects of Noise on the Inverse Problem of Electrocardiography with Bayesian Estimation**  
SERİNAĞAOĞLU DOĞRUSÖZ Y., Bear L., Svehlikova J., Coll-Font J., Good W., Dubois R., Van Dam E., Macleod R.  
45th Computing in Cardiology Conference, CinC 2018, Maastricht, Netherlands, 23 - 26 September 2018
- XIII. **False Ventricular-Fibrillation/Flutter Alarm Reduction of Patient Monitoring Systems in Intensive Care Units**  
Yanar E., Dogrusoz Y.  
13th IEEE International Symposium on Medical Measurements and Applications, MeMeA 2018, Rome, Italy, 11 - 13 June 2018
- XIV. **Effects of measurement noise in MARS-based inverse ECG solution approach MARS ile Ters EKG problemi çözümünde ölçüm gürültüsünün etkileri**  
Onak Ö. N., Doğrusöz Y., Weber G. W.  
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- XV. **PPG signal-based pre-clinical usage arrhythmia detection method PPG sinyalleri kullanılarak mobil cihazlara uygulanabilir erken aritmi tespit metodu**  
Yanar E., Dogrusoz Y.  
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- XVI. **Effect of input size on the classification of lung nodules using convolutional neural networks Akciğer nodüllerinin evrimsel sinir ağları kullanarak sınıflandırılmasında girdi boyutunun etkisi**  
POLAT G., Dogrusoz Y., HALICI U.  
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- XVII. **A Learning Based Statistical Approach for Combining Multiple Measurements in Electrocardiographic Imaging**  
Erenler T., Dogrusoz Y.  
45th Computing in Cardiology Conference (CinC), Maastricht, Netherlands, 23 - 26 September 2018
- XVIII. **Impact of Signal Preprocessing on the Inverse Localization of the Origin of Ventricular Pacing**  
Svehlikova J., Zelinka J., Dogrusoz Y., Good W., Tysler M., Bear L.  
45th Computing in Cardiology Conference (CinC), Maastricht, Netherlands, 23 - 26 September 2018
- XIX. **Robustness of Reduced Order Non-Parametric Model for Inverse ECG Solution Against Modeling and Measurement Noise**  
Onak O. N., Dogrusoz Y., Weber G. W.  
45th Computing in Cardiology Conference (CinC), Maastricht, Netherlands, 23 - 26 September 2018
- XX. **Effects of ECG Signal Processing on the Inverse Problem of Electrocardiography**  
Bear L. R., Dogrusoz Y., Svehlikova J., Coll-Font J., Good W., van Dam E., Macleod R., Abell E., Walton R., Coronel R., et al.  
45th Computing in Cardiology Conference (CinC), Maastricht, Netherlands, 23 - 26 September 2018
- XXI. **Reducing False Arrhythmia Alarms of Patient Monitoring Systems in the Intensive Care Units**  
yanar e., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
Computing in Cardiology, 24 - 27 September 2017
- XXII. **Effect of the Geometric Inaccuracy in Multivariate Adaptive Regression Spline-based Inverse ECG Solution Approach**  
Onak O. N., SERİNAĞAOĞLU DOĞRUSÖZ Y., Weber G. W.  
44th Computing in Cardiology Conference (CinC), Rennes, France, 24 - 27 September 2017
- XXIII. **Effect of the Geometric Inaccuracy in MARS-based Inverse ECG Solution Approach**  
Onak O. N., SERİNAĞAOĞLU DOĞRUSÖZ Y., weber g. w.  
Computing in Cardiology, 24 - 27 September 2017
- XXIV. **False Arrhythmia Alarms of Patient Monitoring Systems in Intensive Care Units**  
Yanar E., SERİNAĞAOĞLU DOĞRUSÖZ Y.

44th Computing in Cardiology Conference (CinC), Rennes, France, 24 - 27 September 2017

- XXV. **Reducing false arrhythmia alarms of patient monitoring systems in intensive care units Yoğun Bakım Ünitelerindeki Hasta Başı Monitörlerinde Görülen Yanlış Aritmi Alarmlarının Azaltılması**  
Yanar E., Dogrusoz Y.  
25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017
- XXVI. **Reducing False Arrhythmia Alarms of Patient Monitoring Systems in Intensive Care Units**  
Yanar E., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- XXVII. **Simulation of Transmembrane Potential Propagation in Normal and Ischemic Tissue Using Aliev Panfilov Model**  
Seyedebrahimi M., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
International Conference on Medical Information and Bioengineering, 2 - 05 November 2016, vol.7, pp.13-19
- XXVIII. **Characterization and performance estimation of a MEMS spirometer**  
Habibiabad S., SERİNAĞAOĞLU DOĞRUSÖZ Y., Beyaz M. I.  
30th Eurosensors Conference, Budapest, Hungary, 4 - 07 September 2016, vol.168, pp.1020-1023
- XXIX. **Conceptual design and evaluation of a multichannel ECG data acquisition device**  
Robaei M., Dogrusoz Y., Küçükdeveci F.  
8th International Conference on Bio-Inspired Systems and Signal Processing, BIOSIGNALS 2015, Lisbon, Portugal, 12 - 15 January 2015, pp.240-245
- XXX. **Noise reduction using 2D Anisotropic Diffusion Filter in inverse electrocardiography**  
Mazlouni Gavgani A., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
13th Mediterranean Conference on Medical and Biological Engineering and Computing 2013, MEDICON 2013, Sevilla, Spain, 25 - 28 September 2013, vol.41, pp.505-508
- XXXI. **Noise Reduction using Anisotropic Diffusion Filter in Inverse Electrocardiology**  
Gavgani A. M., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
34th Annual International Conference of the IEEE Engineering-in-Medicine-and-Biology-Society (EMBS), California, United States Of America, 28 August - 01 September 2012, pp.5919-5922
- XXXII. **Use of Genetic Algorithm for Selection of Regularization Parameters in Multiple Constraint Inverse ECG Problem**  
Gavgani A. M., SERİNAĞAOĞLU DOĞRUSÖZ Y.  
33rd Annual International Conference of the IEEE Engineering-in-Medicine-and-Biology-Society (EMBS), Massachusetts, United States Of America, 30 August - 03 September 2011, pp.985-988
- XXXIII. **Detection of Post Apnea Sounds and Apnea Periods from Sleep Sounds**  
Karci E., SERİNAĞAOĞLU DOĞRUSÖZ Y., ÇİLOĞLU T.  
33rd Annual International Conference of the IEEE Engineering-in-Medicine-and-Biology-Society (EMBS), Massachusetts, United States Of America, 30 August - 03 September 2011, pp.6075-6078
- XXXIV. **Combination of conventional regularization methods and genetic algorithm for solving the inverse problem of electrocardiography**  
Sarikaya S., Weber G., Doğrusöz Y.  
2010 5th International Symposium on Health Informatics and Bioinformatics, HIBIT 2010, Antalya, Turkey, 20 - 22 April 2010, pp.13-20
- XXXV. **Graphical user interface for inverse problem of electrocardiography Elektrokardiyografi ters problemi için grafik kullanıcı arayüzü**  
Gavgani A. M., Serinağaoğlu Y.  
2010 15th National Biomedical Engineering Meeting, BIYOMUT2010, Antalya, Turkey, 21 - 24 April 2010
- XXXVI. **Implementation of the minimum relative (cross) entropy method for the solution of inverse ECG problem Minimum göreceli (çapraz) entropi (MGE) metodunun ters ekg probleminin çözümünde uygulanması**  
Bircan A., Serinağaoğlu Y.  
2010 15th National Biomedical Engineering Meeting, BIYOMUT2010, Antalya, Turkey, 21 - 24 April 2010
- XXXVII. **Electromechanical heart tissue model using cellular automaton Hücresel otomaton yöntemi ile**

**elektromekanik kalp doku modeli**

Bora C., Serinağaoğlu Y., TÖNÜK E.

2010 15th National Biomedical Engineering Meeting, BIYOMUT2010, Antalya, Turkey, 21 - 24 April 2010

- XXXVIII. **Comparison of Kalman filter and Bayesian-MAP approaches in the spatio-temporal solution of the inverse electrocardiography** Ters elektrokardiyografinin zaman-uzamsal çözümünde Kalman filtre ve Bayes-MAP yöntemlerinin karşılaştırılması

Aydın Ü., Serinağaoğlu Y.

2010 15th National Biomedical Engineering Meeting, BIYOMUT2010, Antalya, Turkey, 21 - 24 April 2010

- XXXIX. **Fast 3D reconstruction from medical image series based on thresholding method** Eşikleme metodunu kullanarak medikal görüntü serisinden hızlı 3 boyutlu model oluşturma

Öz S., Doğrusöz Y.

2010 15th National Biomedical Engineering Meeting, BIYOMUT2010, Antalya, Turkey, 21 - 24 April 2010

- XL. **The effects of geometric errors on inverse ECG solutions using Kalman filter and Bayesian MAP estimation** Kalman filtre ve Bayes-MAP ile ters EKG çözümlerinde geometrik hataların etkisi

Aydın Ü., Serinağaoğlu Y.

2009 14th National Biomedical Engineering Meeting, BIYOMUT 2009, Balçova, İzmir, Turkey, 20 - 22 May 2009

- XLI. **Estimation of state transition matrix in the Kalman filter based inverse ECG solution with the help of training sets** Ters EKG probleminin Kalman filtre ile çözümünde durum geçiş matrisinin eğitici kümeler yardımı ile kestirimi

Aydın Ü., Serinağaoğlu Y.

2009 14th National Biomedical Engineering Meeting, BIYOMUT 2009, Balçova, İzmir, Turkey, 20 - 22 May 2009

- XLII. **Comparison of Bayesian MAP Estimation and Kalman Filter Methods in the Solution of Spatio-Temporal Inverse ECG Problem**

Aydın U., SERİNAĞAOĞLU DOĞRUSÖZ Y.

11th International Congress of the IUPESM/World Congress on Medical Physics and Biomedical Engineering, Munich, Germany, 7 - 12 September 2009, vol.25, pp.715-718

- XLIII. **STATISTICAL MODELING OF THE GEOMETRIC ERROR IN CARDIAC ELECTRICAL IMAGING**

Aydın U., SERİNAĞAOĞLU DOĞRUSÖZ Y.

IEEE International Symposium on Biomedical Imaging - From Nano to Macro, Massachusetts, United States Of America, 28 June - 01 July 2009, pp.442-445

- XLIV. **IMAGING THE ELECTRICAL ACTIVITY OF THE HEART USING A KALMAN FILTER BASED APPROACH: COMPARISON OF RESULTS USING DIFFERENT STM'S**

SERİNAĞAOĞLU DOĞRUSÖZ Y., Aydın U.

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- XLV. **Spectral envelope analysis of snoring signals**

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## Supported Projects

SERİNAĐAOĐLU DOĐRUSÖZ Y., TUBITAK Project, Bayes Kestirim Yöntemlerinin Elektrokardiyografik Görüntülemeye Uygulanması: Önsel Model Seçimi Ve Gürültü Etkilerinin Azaltılması, 2018 - 2021

SERİNAĐAOĐLU DOĐRUSÖZ Y., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016

SERİNAĐAOĐLU DOĐRUSÖZ Y., TUBITAK Project, Kalbin Elektriksel Aktivitesinin 3 Boyutlu Transmembran Potansiyel Dađılımları Cinsinden Girişimsiz Olarak Görüntülenmesi, 2012 - 2015

SERİNAĐAOĐLU DOĐRUSÖZ Y., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014

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SERİNAĐAOĐLU DOĐRUSÖZ Y., TUBITAK Project, Geri Elektrokardiyografi Kalpteki Biyo Elektriksel Kaynakların İstatistiksel Olarak Kestirilmesi, 2007 - 2010

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## **Memberships / Tasks in Scientific Organizations**

Artificial Intelligence Scientific Board, Member of Science Committee, 2022 - Continues, Turkey

## **Scientific Refereeing**

IEEE TRANSACTIONS ON MEDICAL IMAGING, SCI Journal, July 2023

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, TUBITAK, Turkey, June 2022

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## **Tasks In Event Organizations**

Serinağaoğlu Doğrusöz Y., Guillem M., Electrocardiographic Imaging Summit, Scientific Congress, Valencia, Spain, Kasım 2023

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## **Metrics**

Publication: 76

Citation (WoS): 309

Citation (Scopus): 393

H-Index (WoS): 7

H-Index (Scopus): 9

## **Non Academic Experience**

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