

ÖZGEÇMİŞ

İletişim Bilgileri

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1. Adı Soyadı : Nizamettin AYDIN

2. Doğum Tarihi : 21.09.1962

3. Ünvanı : Profesör

4. Öğrenim durumu : Doktora

Derece	Alan	Üniversite	Yıl
Lise	Elektrik	Bursa Demirtaşpaşa Teknik Lisesi	1980
Lisans	Elektronik ve Haberleşme	Yıldız Teknik Üniversitesi	1984
Y. Lisans	Elektronik ve Haberleşme	Yıldız Teknik Üniversitesi	1987
Doktora	Biyomedikal Mühendisliği	Leicester Üniversitesi (UK)	1994

5. Akademik Ünvanlar

Profesör : Bilgisayar Mühendisliği Bölümü, Yıldız Teknik Üniversitesi (2009 – Devam ediyor)

Profesör : Yazılım Mühendisliği Bölümü, Bahçeşehir Üniversitesi (2006 – 2009)

Doçent : Bilgisayar Mühendisliği Bölümü, Bahçeşehir Üniversitesi (2004 –2006)

Snr. Research Fellow : The Institute for Micro and Nano Systems, School of Engineering & Electronics, University of Edinburgh (2001-2004)

Research Fellow : Clinical Neuroscience, St George's Hospital Medical School, University of London (1999-2001)

Research Fellow : Department of Clinical Neurosciences, Institute of Psychiatry, King's College London (1998-1999)

Doçent : Elektronik Mühendisliği Bölümü Gebze Yüksek Teknoloji Enstitüsü (1999-2000)

Yrd Doçent : Elektronik Mühendisliği Bölümü Gebze Yüksek Teknoloji Enstitüsü (1995-1999)

Research Assistant : Department of Medical Physics, Leicester Royal Infirmary (1994-1995)

Arş. Görevlisi : Elektrik Mühendisliği Bölümü, Yıldız Teknik Üniversitesi (1986-1989)

6. Yönetilen Yüksek Lisans ve Doktora Tezleri

20 den fazla Bitirme Tez Danışmanlığı (1995-2009)

7. Projeler

- Collaborative immersive visualization techniques for the interpretation of cardiovascular function in critical care medicine, EPSRC (GR/S82190), 2004-2006. (In collaboration with Dr. P. Dark (University of Manchester), Dr. P. Chapman (University of Hull), and Dr. J. Purdy (Computer Science Department, University of Hull)).
- Developing and evaluating an automated embolic signal detection system based on wavelet processing, British Heart Foundation (PG/99064), 1999-2002. (In collaboration with Prof. H. Marcus (St Georges Hospital, Department of Clinical Neuroscience, University of London), and Dr. F. Marvasti (Electronics Engineering Department, Kings College London)).
- Fuzzy C-Means Based Clustering Algorithms Approach to Magnetic Resonance Image Segmentation, Gebze Institute of Technology, University Research Committee, 1997-1998. (In collaboration with Dr. M. Esin and H. Seker).
- Development and implementation of multi-frequency Doppler System, Gebze Institute of Technology, University Research Committee, 1995-1997.

8. İdari Görevler

- Kurucu Bölüm Başkanı: Bahçeşehir Üniversitesi, Mühendislik Fakültesi, Yazılım Mühendisliği Bölümü, Ekim 2005-Ağustos 2008.
- Bölüm Başkanı: Bahçeşehir Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, Ekim 2004-Ekim 2005.
- Fakülte Yönetim Kurulu Üyesi: Bahçeşehir Üniversitesi, Mühendislik Fakültesi, Ağustos 2008-Eylül 2009.
- Akademik Senato Üyesi: University of Edinburgh, Ekim 2002 - Temmuz 2004.
- Bölüm Başkan Yardımcısı: Gebze Yüksek Teknoloji Enstitüsü, Mühendislik Fakültesi, Elektronik Mühendisliği Bölümü, Gebze, Şubat 1995 - Mart 1998.

9. Bilimsel ve Mesleki Kuruluşlara Üyelikler

- Associate Editor: IEEE Transaction on Information Technology in Biomedicine, Ocak 2003 ten beri.
- Turkish Chapter of IEEE Signal Processing Society, 1995 den beri.
- Turkish Chapter of IEEE Computer Society, 1995 den beri.
- IEEE Signal Processing Society, 1992 den beri.
- IEEE Engineering in Medicine and Biology Society, 1992 den beri.
- Elektrik Mühendisleri Odası, 1985 ten beri.

10. Uluslararası yayın, konferans ve proje değerlendirmede yapılan hakemlikler

Hakemlik yapılan uluslararası yayınlar:

- IEEE Transactions on Circuits and Systems
- IEEE Transactions on Biomedical Engineering
- IEEE Transaction on Information Technology in Biomedicine
- IEEE Transaction on Dielectrics and Electrical Insulation
- IEEE EMBS Magazine
- IEEE Signal Processing Letters
- IEE Proceedings, Science, Measurement and Technology
- Medical Engineering and Physics
- Computers & Electrical Engineering
- Journal of Medical Systems
- Medical & Biological Engineering & Computing
- Journal of Biomedicine and Biotechnology
- ETRI Journal
- Physiological Measurement
- EURASIP Journal on Embedded Systems
- EURASIP Journal on Advances in Signal Processing
- Computational Intelligence
- Contemporary Clinical Trials

Hakemlik yapılan uluslararası konferanslar:

- IEEE ASIC/SOC Conference 2003

- IEEE SOC Conference 2004
- IEEE ISCASS Conference 2003
- IEEE ISCASS Conference 2004
- IEEE ISCASS Conference 2005
- IEEE ISCASS Conference 2006
- IEEE ISCASS Conference 2007
- IEEE ISCASS Conference 2008
- 2nd NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2007)
- 3rd NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2008)
- 4th NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2009)
- The Genetic and Evolutionary Computation Conference (GECCO-2008)
- The Genetic and Evolutionary Computation Conference (GECCO-2009)

Proje değerlendirme/hakemlik yapılan kuruluşlar:

- Engineering and Physical Sciences Research Council (EPSRC), UK
- Türkiye Bilimsel ve Teknik Araştırma Kurumu (TÜBİTAK)
- Bilgi Teknolojileri ve İletişim Kurumu

Bilim Komitesi Eşbaşkanı olunan konferanslar:

- International Research/Expert Conference - Trends in The Development of Machinery and Associated Technologies (TMT 2007), September 2007.
- International Research/Expert Conference - Trends in The Development of Machinery and Associated Technologies (TMT 2006), Barcelona, September 2006.
- International Research/Expert Conference - Trends in The Development of Machinery and Associated Technologies (TMT 2005), Antalya, September 2005.

Organizasyon Komitesi Başkanı olunan konferanslar:

- 1st NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2006), June 2006, Bahcesehir University, Istanbul, TR.

Program Komitesi Eşbaşkanı olunan konferanslar:

- E-Learning '07 Conference, august 2007, Bahcesehir University, Istanbul, TR
- NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2007), August 2007, University of Edinburgh, Scotland, UK.

Program Komitesi Üyesi olunan konferanslar:

- NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2008), August 2008, June 2008, European Space Agency (ESA), Noordwijk, The Netherlands.
- International Symposium on INnovations in Intelligent SysTems and Applications (INISTA 2007), June 2007, İSTANBUL , TURKEY.
- ECSIS Symposium on Intelligent Systems for Defense and Security (ISDS), September 2006, Iasi, Romania.
- The International Workshop on Applications of Wavelets to Real World Problems (IWW2007). Istanbul, June 2007.
- 2007 ECSIS Symposium on Bio-inspired Learning and Intelligent Systems for Security (BLISS-2007), August 2007, Edinburgh, UK.

- 3rd National Software Engineering Symposium and Exhibition, September 2007, Bilkent University, Ankara, TR.
- The 2nd International Conference on Information Security and Assurance, April 2008, Busan, Korea.
- 4th International Conference on Global E-Security, June 2008, University of East London (UeL), Docklands, London, UK.
- 2008 ECSIS Symposium on Bio-inspired Learning and Intelligent Systems for Security (BLISS-2008), August 2008, Edinburgh, UK.

11. Ödüller

- The IEE the Institute Premium Ödülü (2000/2001 yılları için İngiltere'deki Elektrik Mühendisleri Enstitüsü (The Institute of Electrical Engineers) tarafından verilmiştir).
- En iyi sunum ödülü (Best Presentation Award): St George's Cardiovascular Research Committee, Londra, Ekim 2000.
- Milli Eğitim Bakanlığı yurt dışı doktora bursu, 1989 – 1994.
- Türk Petrol Vakfı bursu, 1980 – 1987.

12- Verdiği bazı dersler

Lisans:

- Electronic Circuits & Systems
- Circuit Theory
- Advanced Microprocessors
- Digital Circuits & Design
- Fundamentals of Logic and Microprocessors
- Electrical & Electronics measurements & systems
- Introduction to Computer Sciences and Information Technology
- Microprocessors
- Computer Organization
- Computer Architecture
- Introduction to Computing Systems
- Introduction to Bioinformatics

Yüksek Lisans:

- Applied Digital Signal Processing
- Statistical Signal Processing
- Image Processing Fundamentals
- Principles of Doppler Ultrasound
- Principles of Computerized Tomographic Imaging
- Numerical Methods Using MAPLE
- Technical English
- Bioinformatics
- Bilgisayar Donanımı

Yayın Listesi

1. Uluslararası hakemli dergilerde yayınlanan makaleler (SCI & SSCI & Arts and Humanities)

- 1) Serbes, G., **Aydin, N.**, "Modified dual tree complex wavelet transform for processing quadrature signals", *Biomedical Signal Processing and Control*, Issue 3, Vol. 6, pp. 301-306, 2011.
- 2) Kurşun, O., Şakar, C. O., Favorov, O., **Aydin, N.**, Gürgen, F., "Using covariates for improving the minimum Redundancy Maximum Relevance feature selection method", *Turk J Elec Eng & Comp Sci*, Issue 6, Vol. 18, pp. 976-987, 2010.
- 3) Temel T, Morgul A, **Aydin N**, "Signed higher-radix full-adder algorithm and implementation with current-mode multi-valued logic circuits ". *IEE Proc.-Circuits Devices Syst.*, Vol. 153, No. 5, 489-496, October 2006.
- 4) **Aydin N**, Arslan T, Cumming DRS, "A Direct Sequence Spread-spectrum Communication System for Integrated Sensor Microsystems". *IEEE Trans Inf Tech Biomed.* 9, 1, 4-12, 2005.
- 5) **Aydin N**, Marvasti F, Markus HS, "Embolitic Doppler ultrasound signal detection using discrete wavelet transform". *IEEE Trans Inf Tech Biomed.* 8, 2, 182-190, 2004.
- 6) Seker H, Evans DH, **Aydin N**, Yazgan E, "Compensatory fuzzy neural network based intelligent detection of abnormal neonatal cerebral Doppler ultrasound waveforms". *IEEE Trans Inf Tech Biomed.* 5, 3, 187-194, 2001.
- 7) **Aydin N**, Markus HS, "Time-scale analysis of quadrature Doppler ultrasound signals". *IEE Proceedings - Science, Measurement and Technology.* 148, 1, 15-22, 2001.
- 8) **Aydin N**, Markus HS, "Directional wavelet transform in the context of complex quadrature Doppler signals". *IEEE Signal Processing Letters.* 10, 7, 278-280, 2000.
- 9) **Aydin N**, Padayachee S, Markus HS, "The use of the wavelet transform to describe embolic signals". *Ultrasound Med Biol.* 25, 6, 953-958, 1999.
- 10) **Aydin N**, Markus HS, "The use of the wavelet transform to describe embolic signals". *Cerebrovasc Dis.* 9, suppl. 2, S7, 1999.
- 11) Thrush AJ, **Aydin N**, Nydahl S and Evans DH, "A new on - line automated system for monitoring lower limb bypass grafts". *Journal of Ultrasound in Medicine*, 14, suppl. 3, S35, March 1995.
- 12) **Aydin N**, Fan L, Evans DH, "Quadrature-to-directional format conversion of Doppler signals using digital methods". *Physiol Meas*, 15, 181-199, 1994.
- 13) **Aydin N**, Evans DH, "Implementation of directional Doppler techniques using a digital signal processor". *Med Biol Eng Comput*, 32, S157-S164, 1994.

2. Uluslararası diğer hakemli dergilerde yayınlanan makaleler

- 14) Bale K, Chapman P, Barraclough N, Purdy J, **Aydin N**, and Dark P, "Kaleidomaps: a new technique for the visualization of multivariate time-series ". *Information Visualization*, Vol. 6; No. 2, 155-167, 2007
- 15) **Aydin N**, Markus HS, "Optimisation of processing parameters for the analysis and detection of embolic signals". *European Journal of Ultrasound.* 12, 1, 69-79, 2000.
- 16) **Aydin N**, "Time varying filtering approach for simulation of ultrasonic Doppler signals". *Journal of Computer Simulation & Modelling in Medicine.* 1, 1, 67-76, 2000.
- 17) Moraes R, **Aydin N**, Evans DH, "The performance of three maximum frequency envelope detection algorithms for Doppler signals". *Journal of Vascular Investigation.* 1, 3, 126-134, 1995.
- 18) **Aydin N**, Evans DH, "A computerised arterial graft monitoring system". *Journal of Vascular Investigation.* 1, 2, 68-74, 1995.

3. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler

- 19) **Serbes, G., Şakar, C. O., Aydin, N., Kahya, Y. P.**, " Feature Extraction Using Time-Frequency/Scale Analysis and Ensemble of Feature Sets for Crackle Detection," Engineering in Medicine and Biology Society (EMBC), 2011 Annual International Conference of the IEEE , vol., no., pp. 3314- 3314, Aug. 30 2011-Sept. 3 2011.

- 20) **Serbes, G., Aydin, N.**, " Symmetrical Modified Dual Tree Complex Wavelet Transform for Processing Quadrature Doppler Ultrasound Signals," Engineering in Medicine and Biology Society (EMBC), 2011 Annual International Conference of the IEEE , vol., no., pp. 4816- 4819, Aug. 30 2011-Sept. 3 2011.
- 21) **Chrysostomou, C., Seker, H., Aydin, N.**, " Effects of windowing and zero-padding on Complex Resonant Recognition Model for protein sequence analysis," Engineering in Medicine and Biology Society (EMBC), 2011 Annual International Conference of the IEEE , vol., no., pp. 4955- 4958, Aug. 30 2011-Sept. 3 2011.
- 22) **Serbes, G., Aydin, N.**, "Denoising performance of modified dual tree complex wavelet transform," Information Technology and Applications in Biomedicine (ITAB), 2010 10th IEEE International Conference on , vol., no., pp.1-4, 3-5 Nov. 2010.
- 23) **Chrysostomou, C., Seker, H., Aydin, N., Haris, P.I.**, "Complex Resonant Recognition Model in analysing Influenza a virus subtype protein sequences," Information Technology and Applications in Biomedicine (ITAB), 2010 10th IEEE International Conference on , vol., no., pp.1-4, 3-5 Nov. 2010.
- 24) Serbes, G.; Aydin, N.; , "Denoising embolic Doppler ultrasound signals using Dual Tree Complex Discrete Wavelet Transform," *Engineering in Medicine and Biology Society (EMBC), 2010 Annual International Conference of the IEEE* , vol., no., pp.1840-1843, Aug. 31 2010-Sept. 4 2010.
- 25) Orun, A.B.; Aydin, N.; , "Variable optimisation of medical image data by the learning Bayesian Network reasoning," *Engineering in Medicine and Biology Society (EMBC), 2010 Annual International Conference of the IEEE* , vol., no., pp.4554-4557, Aug. 31 2010-Sept. 4 2010.
- 26) Sakar CO, Kursun O, Seker H, Gurgen F, **Aydin N**, Favorov OV, "Parallel interacting multiview learning: An application to prediction of protein sub-nuclear location," Information Technology and Applications in Biomedicine, 2009. *ITAB 2009. 9th International Conference on* , vol., no., pp.1-4, 4-7 Nov. 2009.
- 27) Serbes G, **Aydin N**, "A complex discrete wavelet transform for processing quadrature Doppler ultrasound signals," Information Technology and Applications in Biomedicine, 2009. *ITAB 2009. 9th International Conference on* , vol., no., pp.1-4, 4-7 Nov. 2009.
- 28) **Aydin N**, Arslan T, "Review of Communication Systems for Ingestible Miniaturized Integrated Sensor Microsystems," *Advanced Technologies for Enhanced Quality of Life, 2009. AT-EQUAL '09.* , vol., no., pp.91-95, 22-26 July 2009.
- 29) Yang Z, Karahoca A, Yang N, **Aydin N**, "Network intrusion detection by using cellular neural network with tabu search". *ECSIS Symposium on Bio-inspired, Learning, and Intelligent Systems for Security (BLISS-2008), Edinburgh, August 2008*
- 30) **Aydin N**, Arslan T, "Analysis and Optimization of a Wireless Communication System for an Ingestible Sensor Microsystem". *Frontiers in the Convergence of Bioscience and Information Technologies (FBIT 2007), Jeju Island, October 2007.*
- 31) Karahoca A, **Aydin N**, "Benchmarking of Data Mining Techniques for Emboli Detection". *Frontiers in the Convergence of Bioscience and Information Technologies (FBIT 2007), Jeju Island, October 2007.*
- 32) Karahoca A, **Aydin N**, "GSM Churn Management Using and Adaptive Neuro-Fuzzy Inference System". *International Conference on Intelligent Pervasive Computing (IPC 2007), Jeju Island, October 2007.*
- 33) Karahoca A, Karahoca D, Yengin İ, **Aydin N**, Güngör A, " Usability Evaluation of a Meta-Cognitive Tool". e-Learning conference '07, *Istanbul, August 2007.*
- 34) Karahoca A, Karahoca D, Ince İF, Gökçeli R, **Aydin N**, Güngör A, " Intelligent Question Classification for e-learning by ANFIS ". e-Learning conference '07, *Istanbul, August 2007.*
- 35) Salman YB, Karahoca A, Kim JY, **Aydin N**, Güngör A , " A Research Study: Mobile Learning in South Korea ". e-Learning conference '07, *Istanbul, August 2007.*
- 36) **Aydin N**, "DWT Based Adaptive Threshold Determination in Embolic Signal Detection ". *Proc. NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2007), Edinburgh, August 2007.*
- 37) Temel T, **Aydin N**, "A threshold free clustering algorithm for robust, unsupervised classification ". *ECSIS Symposium on Bio-inspired, Learning, and Intelligent Systems for Security (BLISS-2007), Edinburgh, August 2007*
- 38) Karahoca A, Kucur T, **Aydin N**, "Data Mining Usage in Emboli Detection". *ECSIS Symposium on Bio-inspired, Learning, and Intelligent Systems for Security (BLISS-2007), Edinburgh, August 2007*
- 39) Kaleli F, **Aydin N**, Ertas G, Gulcur HO, "An Adaptive Approach to the Segmentation of DCE-MR Images of the Breast: Comparison with Classical Thresholding Algorithms", *IEEE Symposium on Computational Intelligence in Image and Signal Processing (CIISP 2007)*, 1-5 April 2007 Page(s):375 – 379.
- 40) Temel T, **Aydin N**, "A novel information-theoretic clustering algorithm for robust, unsupervised classification". *9th International Symposium on Signal Processing and Its Applications (ISSPA2007)*, Sharjah, February, 2007.

- 41) **Aydin N**, "Processing of Complex Quadrature Signals". *ECSIS Symposium on Intelligent Systems for Defense and Security (ISDS)*, Iasi, September 2006.
- 42) Kaleli F, **Aydin N**, "A Region based thresholding Algorithm for Segmenting of Axial MR Breast Images ". *European Conference on Intelligent Systems and Technologies (ECIT 2006)*, Iasi, September 2006.
- 43) Bale K, Chapman P, Purdy J, **Aydin N**, Dark P, "Kaleidomap Visualizations of Cardiovascular Function in Critical Care Medicine". *International Conference on Medical Information Visualisation--BioMedical Visualisation (MedVis'06)*, 51-58, 2006.
- 44) **Aydin N**, " Choice of Wavelet Function in Detection of Embolic Signals Using Discrete Wavelet Transform ". *Proc. 5th Annual IEEE EMBS Special Topic Conference on Information Technology Applications in Biomedicine (ITAB2006)*, Ioannina, September 2006.
- 45) **Aydin N**, Arslan T, "Power Driven Reconfigurable Complex Continuous Wavelet Transform". *Proc. 1st NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2006)*, Istanbul, 109 – 113, June 2006
- 46) Wang L, **Aydin N**, Astaras A, Ahmadian M, Hammond PA, Tang TB, Johannessen E, Arslan T, Beaumont SP, "A Sensor System on Chip for Wireless Microsystems". *IEEE 2006 International Symposium on Circuits and Systems (ISCAS 2006)*, Kos, May 2006.
- 47) Revett K, **Aydin N**, "Attribute Extraction and Classification Using Rough Sets on a Lymphoma Dataset". *Proc. International Symposium on Health Informatics and Bioinformatics (HIBIT 2005)*, Antalya, 93-97, November 2005.
- 48) **Aydin N**, "A Fourier Domain Method for Recovering SSB Signals from Baseband Equivalents". *Proc. 9th International Research/Expert Conference - Trends in The Development of Machinery and Associated Technologies (TMT 2005)*, Antalya, 1483-1486, September 2005.
- 49) **Aydin N**, "Complex Wavelet Transform for Processing Complex Quadrature Doppler Signals". *Proc. International Workshop on Applications of Wavelets to Real World Problems(IWW 2005)*, Istanbul, 221-232, July 2005.
- 50) Pai A, Khawam S, **Aydin N**, Arslan T, Benkrid K, "A 2-D systolic motion estimation architecture on a domain-specific reconfigurable substrate ". *Irish Signals and Systems Conference (ISSC'04)*, Belfast, June-July 2004.
- 51) Temel T, Morgul A, **Aydin N**, "A novel signed higher-radix full-adder algorithm and implementation with current-mode multi-valued logic circuits". *IEEE Euromicro Symposium on Digital System Design*, Paris, 80-87, September 2004.
- 52) Khawam S, Baloch S, Pai A, Ahmed I, **Aydin N**, Arslan T, Westall F, "Efficient Implementations of Mobile Video Computations on Domain-Specific Reconfigurable Arrays ". *Design, Automation and Test in Europe Conference (DATE 04)*, Paris, 1230-1235, February 2004.
- 53) **Aydin N**, Astaras A, Wang L, Arslan T, Murray AF, Beaumont SP, Cumming DRS, "Design and implementation considerations for an advanced wireless interface in miniaturized integrated sensor microsystems". *25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Cancun, 3400-3402, September 2003.
- 54) **Aydin N**, Arslan T, Cumming DRS, "The design of optimized programmable transmitter and receiver architectures for an integrated sensor microsystem". *16th Annual IEEE International ASIC/SOC Conference*, Portland, 71-74, September 2003.
- 55) **Aydin N**, Arslan T, Cumming DRS, "Power/area analysis and optimization of a DS-SS receiver for an integrated sensor microsystem". *IEEE Euromicro Symposium on Digital System Design*, Antalya, 402-408, September 2003.
- 56) **Aydin N**, "Frequency and Scale Domain Analysis of Complex Quadrature Embolic Doppler Ultrasound Signals". *IEEE 3rd International Symposium on Image and Signal Processing and Analysis*, Rome, 888-891, September 2003.
- 57) **Aydin N**, Arslan T, Murray AF, "Identification and Detection of Embolic Doppler Signals Using DWT and Fuzzy Logic". *Proc. International Fuzzy systems World Congress (IFSA 2003)*, Istanbul, 119-122, June 2003.
- 58) **Aydin N**, Arslan T, Cumming DRS, "Direct sequence CDMA based wireless interface for an integrated sensor microsystem". *Proc. 4th Annual IEEE EMBS Special Topic Conference on Information Technology Applications in Biomedicine (ITAB2003)*, Birmingham, 370-373, April 2003.
- 59) Astaras A, Ahmadian M, **Aydin N**, Cui L, Johannessen E, Tang TB, Wang L, Arslan T, Beaumont SP, Flynn BW, Murray AF, Reid SW, Yam P, Cooper JM, and Cumming DRS, "A miniature integrated electronics sensor capsule for real-time monitoring of the gastrointestinal tract (IDEAS)". *Proc. of the IEEE ICBME Conference*, Singapore, December 2002.
- 60) Johannessen EA, Tang TB, Wang L, Cui L, Ahmadian M, **Aydin N**, Astaras A, Murray AF, Flynn BW, Arslan T, Beaumont SP, Cumming DRS, and Cooper JM, "An ingestible electronic pill for real time

- analytical measurements of the gastrointestinal tract". *Proc. of the mTAS 2002 Symposium, Japan*, 181-183, 2002.
- 61) **Aydin N**, Arslan T, Cumming DRS, "Design and implementation of a spread spectrum based communication system for an ingestible capsule". *Proc. 24th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Houston, 1773-1774, 2002.
 - 62) **Aydin N**, Marvasti F, Markus HS, "Effect of wavelet denoising on time-frequency and time-scale analysis of quadrature embolic signals". *Proc. 24th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Houston, 80-81, 2002.
 - 63) **Aydin N**, Purdy J, Dark P, "Localizing systolic ejection within a trans-esophageal CW Doppler ultrasound aortovolographic vaweform". *Proc. 24th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Houston, 1315-1316, 2002.
 - 64) **Aydin N**, Arslan T, Cumming DRS, "A spread spectrum based communication system for an integrated sensor microsystem". *Proc. 15th Annual IEEE International ASIC/SOC Conference*, Rochester, 336-340, 2002.
 - 65) **Aydin N**, Marvasti F, Markus HS, "Detection and estimation of embolic Doppler signals using discrete wavelet transform". *Proc. IEEE ICASSP 2001*, Salt Lake City, 1049-1052, 2001.
 - 66) Seker H, Evans DH, Yazgan E, **Aydin N**, Naguip RG, "Intelligent detection of abnormal neonatal cerebral haemodynamics in a neonatal intensive care environment". *Proc. 23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Istanbul, 1612 -1614, 2001.
 - 67) **Aydin N**, Markus HS, "Time-frequency and time-scale analysis of embolic signals". *Proc. 5th IMA International Conference on Mathematics in Signal Processing*, Warwick, December 2000.
 - 68) **Aydin N**, Markus HS, "A comparison of time-frequency and time-scale analysis of embolic signals". *Proc. 14TH International Conference on Systems Engineering (ICSE 2000)*, Coventry, 28-30, 2000.
 - 69) **Aydin N**, Markus HS, "Optimisation of processing parameters for the analysis and detection of embolic signals". *Proc. 14TH International Conference on Systems Engineering (ICSE 2000)*, Coventry, 31-35, 2000.
 - 70) **Aydin N**, Markus HS, "Wavelet analysis of quadrature Doppler ultrasound signals". *Proc. IEE International Conference on Medical Signal and Information Processing (MEDSIP '2000)*. Bristol, 251-256, 2000.
 - 71) **Aydin N**, Markus HS, "Analysis of low intensity embolic signals using wavelet transform". *Proc. 3rd International Workshop on Biosignal Interpretation (BSI99)*, Chicago, 257-260, 1999.
 - 72) **Aydin N**, Markus HS, "Detection of embolic signals using wavelet transform". *Proc. IEEE-EURASIP Workshop on Non-linear Signal and Image Processing (NSIP'99)*, vol 2, Antalya, 774-778, 1999.
 - 73) Seker H, **Aydin N**, Yazgan E, "Wavelet based signal reconstruction for quadrature signals in Doppler ultrasound". *Proc. the IEEE 2nd International Conference, Biomedical Engineering Days*, Istanbul, 60-61, May 1998.
 - 74) **Aydin N**, Evans DH, "A fast frequency domain algorithm for decoding quadrature Doppler signals". *Proc. 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Amsterdam, vol 18, 993-994, 1996.
 - 75) Evans DH, **Aydin N**, Thrush AJ and Nydahl S, "A computerised arterial graft monitoring system". *Proc. 5th International Conference on Biomedical Engineering*, Singapore, 294-296, December 1994.

4. Yazılan uluslararası kitaplar veya kitaplarda bölümler

- 76) **Chrysostomou, C., Seker, H., Aydin, N.**, " Investigation into the Effects of an Individual Amino Acid on Protein Function by Means of a Resonant Recognition Model," *Lecture Notes in Computer Science*, 2011, Volume 6935, Convergence and Hybrid Information Technology, Pages 229-236.
- 77) **Serbes, G., Şakar, C. O., Aydin, N., Kahya, Y. P.**, " Effect of Different Window and Wavelet Types on the Performance of a Novel Crackle Detection Algorithm," *Lecture Notes in Computer Science*, 2011, Volume 6935, Convergence and Hybrid Information Technology, Pages 575-581.
- 78) Karahoca A, Karahoca D, and **Aydin N**, "Benchmarking the Data Mining Algorithms with Adaptive Neuro-Fuzzy Inference System in GSM Churn Management," in *Data Mining and Knowledge Discovery in Real Life Applications*, Ed: Ponce J and Karahoca A, In-Tech Press, Vienna, pp. 438-451, 2009.
- 79) **Aydin N**, "Venous Air Embolism: Detection via Wavelet Transform," In *Wiley Encyclopedia of Biomedical Engineering* , Ed: Metin Akay, John Wiley & Sons, Inc., Hoboken, 2006
- 80) **Aydin N**, "Time-frequency and time-scale analysis of embolic signals". In *Mathematics of Signal Processing V*, Ed: Mcwhirter JG and Proudler IK, Oxford University Press, Oxford, pp. 241-254, 2002.

5. Ulusal bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler

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