BÜLENT SANKUR

Bogaziçi University
Department of Electrical-Electronics Engineering
34342, Bebek, Istanbul, TURKEY
Phone : (90) 0212-359-6455
Fax: 90-212-287-2465
e-mail : bulent.sankur @ boun.edu.tr
https://academics.boun.edu.tr/bulent.sankur/

EDUCATION

- Ph.D, Dept. Electrical and Systems Engineering, Rensselaer Polytechnic Institute, NY, USA, 1976
- M.S., Dept. of Electrical and Systems Engineering, Rensselaer Polytechnic Institute, NY, USA, 1972.
- B.S. in Electrical Engineering, Robert College, Istanbul, Turkey, 1970

BOĞAZİÇİ UNIVERSITY

- Professor ('87), Department of Electrical-Electronics Engineering; Assoc. Prof. ('81), Assist. Prof. ('76).

- Taught courses in Communications, Signal Processing and Networks at both graduate and undergraduate levels. Supervised several master and Ph.D. theses and directed research in digital signal processing, digital video and image processing. Served in committees for the modernization of curricula.

- Established a Signal and Image Processing laboratory, maintained and contributed with several research projects.

VISITING POSITIONS

- **ECOLE NATIONALE SUPERIEURE des TELECOMMUNICATIONS**, Paris, France: (1999-2000) Visiting Professor, Department of Signal and Image Processing. Research in watermarking, segmentation algorithms and document processing. Supervised students at the project and doctoral levels.

- **DELFT UNIVERSITY of TECHNOLOGY**, The Netherlands: (1990-1992) Visiting Professor, Faculty of Electrical Engineering, Information Theory Group. Conducted research in the statistical and model-based compression of video sequences, for low bit-rate coding. Supervised several students at the master and doctoral level.

- **ISTANBUL TECHNICAL UNIVERSITY** (1987-1989): Professor, Faculty of Electrical and Electronics Engineering, Department of Telecommunications. Activities similar to ones in Boğaziçi University.

- **UNIVERSITY OF OTTAWA**, Canada: (1982-1983) Visiting Associate Professor in Electrical Engineering Department. Taught graduate courses in Communications area. Contributed as researcher and industrial consultant to speech encoding, and DTMF receiver projects.

INDUSTRIAL EXPERIENCE

- **MARMARA RESEARCH CENTER** (1993-2000) Consultant in the projects: a) Document processing and archiving for Turkish newspapers; b) Low-level image processing algorithms; c) Quality control of PCB boards with computer vision.

- **ARÇELİK** (1996-1997) Sound quality control of home appliances and signal processing techniques for industry.

- **TAFICS PROJECT OFFICE** (1987-1990) Assistant Manager. Worked on the planning and specifications of the TAFICS (Turkish Armed Forces Integrated Communication System) strategic communications network with emphasis on switching, signaling, and interoperability.

- **TELETAS TELECOMMUNICATION INDUSTRY** (1986-1990) Worked on ISDN national specifications and planning, and on the prototyping of the ISDN subscriber equipment. Contributed to interworking in signaling procedures.

RESEARCH INTERESTS

- Signal Processing for Security and Forensics
- Biometry; Man-Machine Interfaces
- Image and Video Coding; Quality Metrics
- Biological Signal Processing:
- Signal Processing Techniques: Filter Design and Feature Extraction
- 3D Signal Vision

SCIENTIFIC AWARDS

- Mustafa Parlar Foundation award for Science, December 2002
- Bogazici University Rector's Award of Achievement in Research, July 2005
- Elginkan Foundation award for Service to Culture, February 2009
- Turkish Association of Computer Machinery special award for Achievement, March 2006
- TÜBA: Türk Bilimler Akademisi Üye (2011-2012) ve Bilimler Akademisi Üye (2012- ..)
- EURASIP (European Signal Processing Society) Meritorious Service Award (2013)

- Lifelong Service Award of TÜBİSAD and Türk Bilişim Derneği, 2010 (http://www.tubisad.org.tr/duyuru/eylul210/tubisad_eylul22010_ebulten_05.html)
- IEEE Turkey Section Lifelong Meritorious Service Award, 2019

ACTIVITIES

- Research Activities: Has obtained research grants and funding amounting to a total of 800.000 USD from national and international sources. He has established BUSIM: Signal and Image Processing Laboratory and directed since then. The laboratory hosts presently 6 faculty members and about 20 graduate students. He has been supervising to completion 67 M.Sc. students and 18 Ph.D. students. He was the author in 71 refereed journal papers and 150 conference papers.

- International Cooperation: He initiated double-degree PhD protocols between Boğaziçi U. and some European universities. Through his efforts Boğaziçi U. became partner in two European FP6 projects (BIOSECURE and SIMILAR). He won NSF USA-Turkey Research grants three times (with Prof. Memon from Polytechnic University, NY), obtained TUBITAK-CNR (Italy) research grants twice (with CNR-ISTI, Pisa) and once TUBITAK-CNRS (France) research grant (with Ecole Nationale Superieure des Telecommunications).

- Conference Chairman: Chairman of EUSIPCO-2005: European Signal Processing Conference, Local Chairman of MRCS'06: Multimedia Content Representation, Classification and Security; Local Chairman of ECVP'01: European Conference on Vision and Perception; : Technical Co-chair of ICASSP'00: International Conference on Acoustics, Speech and Signal Processing; Chairman of ICT'96: International Conference on Telecommunications; Chairman of the National Signal Processing Conferences: SIU'93, SIU'97.

- Editorial Board Member: Serves in the Editorial Boards of the Signal Processing (1983-.2009), Journal of Advanced Signal Processing (2005-2011), Journal of Image and Video Processing (2006-..), Annales de Télécommunication.(1992-1994, 2014-2018), Elektrik: Turkish Journal of Electrical Engineering and Computer Science (1989-..).

- Scientific Terminology: He is the author of an encyclopedic dictionary of Information Technologies printed by Pusula Yayıncılık. The trilingual dictionary contains presently more than 17.000 terms with about 2000 illustrations. B. Sankur is also the editor of the Dictionary of Engineering Terminology published by TUBA: Turkish Academy of Sciences. This dictionary was prepared with the contributions of 140 experts and presently contains 46.200 terms with encyclopedic definitions and multilingual (English, French, German) terms.

Ph.D. GRADUATES and THEIR POSITIONS

Tangül Ünerdem Başar (1979)	Illinois Institute of Technology ve University of Illinois at Urbana-Champaign
Mustafa Aktar (1983)	Boğaziçi Üniversitesi, Kandilli Rasathanesi ve Deprem Araştırma Enstitüsü
Emin Anarım (1985)	Boğaziçi Üniversitesi, Elektrik-Elektronik Mühendisliği
Hakan Kalyoncu (1994)	TÜBİTAK Marmara Araştırma Merkezi BTA Enstitüsü başkanı (1999-2006); Yöre Bilişim Kurucusu ve Müdürü.
Mustafa Altınkaya (1994)	İzmir Yüksek Teknoloji Enstitüsü
Işıl Celasun (1996)	İstanbul Teknik Üniversitesi
Yücel Yemez (1997)	Post-Doc: Ecole Nationale Scientifique de Télécommunications, Paris. *Halen*: Koç Üniversitesi,
Fatih Kurugöllü (2000)	Öğretim üyesi: Belfast University; Derby University
İsmail Avcıbaş (2001)	Öğretim üyesi: Başkent Üniversitesi; *Halen*: Turgut Özal Üniversitesi. *Halen*: Üsküdar Üniversitesi
Mehmet Sezgin (2002)	Araştırmacı: Marmara Araştırma Merkezi Bilişim Enstitüsünü araştırmacı ve başkan yardımcısı.
Çiğdem Erdem (2003)	Post-Doc: Delft University of Technology. Öğretim üyesi: Bahçeşehir Üniversitesi ve Momentum A.Ş. Araştırmacı. *Halen*: Marmara Üniversitesi.
Ceyhun Akgül (2007)	Post-Doc: Philips, Eindhoven, VİSTEK Araştırma, Boğaziçi ve İTÜ yarı-süreli öğretim. *Halen*: VISPERA CEO
Helin Dutağacı (2008)	Post-doc: NIST: National Institute of Standards and Technology, ABD; Université d'Angers, France: *Halen*: Osmangazi Üniversitesi,
Koray Kayabol (2008)	Post-doc: CNR: Instituto Scientifico di Tecnologia e Electronica, Italya; *Halen*: Gebze Yüksek Teknoloji Enst.
Koray Çiftçi (2008)	Namuk Kemal Üniversitesi
Hamza Özer (2006)	TÜBİTAK Ulusal Elektronik ve Kriptoloji Araştırma Enstitüsü
Cem Demirkır (2009)	Hava Harp Okulu, Öğretim üyesi; *Halen*: NATO Maintenance and Supply Agency, Luxembourg

Hatice Çınar (2010)	Post-doc: University of Ohio, ABD (2010-2012); *Halen*: Anadolu Üniversitesi (2012-2016). *Halen*: Imbio LLC (USA)
Arman Savran (2010)	Post-doc: University of Pennsylvania (2011-2015); Italian Institute of Technology in the iCub Humanoid Laboratory, Genova, Italy (2015-2018); *Halen*: İzmir Ekonomi Üniversitesi
Oya Çeliktutan (2013)	Post-Doc: Queen Mary University of London (2013-2015), University of Cambridge (2015-2017), and Imperial College London (2017-2018). *Halen*: King's College London,

Human-Computer Interfaces and Biometry

- A. Savran, **B. Sankur**, Non-rigid Registration Based Model-free 3D Facial Expression Recognition, Computer Vision and Image Understanding 162 (2017) 146–165

- Arman Savran, **B. Sankur**, Mustafa Taha Bilge, Regression-based Intensity Estimation of Facial Action Units, Image Vision and Computing, 30 (2012), 774-784

- A. Savran, **B. Sankur**, T. Bilge, Comparative Evaluation of 3D versus 2D Modality for Automatic Detection of Facial Action Units, Pattern Recognition, 45, 767-782, February 2012

- Oya Celiktutan, Christian Wolf, **B. Sankur**, Eric Lombardi, Fast Exact Hyper-Graph Matching for Spatio-Temporal Data, Journal of Mathematical Imaging and Vision, DOI 10.1007/s10851-014-0503-6, 2014

- Christian Wolf, Eric Lombardi, Julien Mille, Oya Celiktutan, Mingyuan Jiu, Moez Baccouche, Emmanuel Dellandré, Charles-Edmond Bichot, Christophe Garcia, **B. Sankur,** Evaluation of video activity localizations integrating quality and quantity measurements, Computer Vision and Image Understanding, 127 (2014) 14–30

- Oya Çeliktutan, Sezer Ulukaya and **B. Sankur**, A Comparative Study of Face Landmarking Techniques, EURASIP J. on Image and Vision Processing, March 2013, doi:10.1186/1687-5281-2013-13

- A. Savran, Nese Alyuz, Hamdi Dibeklioglu, Oya Celiktutan, Berk Gokberk, **Bulent Sankur**, L. Akarun, Bosphorus Database for 3D Face Analysis, BIOID: European Workshop on Biometrics and Identity Management, Roskilde, Denmark, 2008.

- A. Yüksel, L. Akarun, **B. Sankur**, Hand Biometry Based on Vein Geometry and Appearance, IET Computer Vision, Vol. 5, Iss. 6, pp. 398–406, 2011

- B. Gokberk, H. Dutağacı, L. Akarun, **B. Sankur**, Representation Plurality and Decision Level Fusion for 3D Face Recognition, IEEE System Man and Cybernetics, PART B: CYBERNETICS, VOL. 38, NO. 1, FEBRUARY 2008, 155-173, 2008

- H. Dutağacı, **B. Sankur** and E. Yörük, [A comparative analysis of global hand appearance-based person recognition](#), J. Electronic Imaging, 17(1), 011018/1- 011018/19, Jan-March, 2008

- E. Konukoglu, E. Yorük, J. Darbon, **B. Sankur,** [Shape-Based Hand Recognition](#), IEEE Trans. on Image Processing, 15(7), 1803-1815, 2006

- E. Yoruk, H. Dutagaci, **B. Sankur,** [Hand Biometry](#), Image And Vision Computing, 24(5), 483-497, 2006.

- O. Aran, İ. Arı, L. Akarun, **B. Sankur**, A. Benoit, A. Caplier, P. Campr, A. H. Carrillo, F.-X. Fanard, [SignTutor: An Interactive System for Sign Language Tutoring](#), IEEE Multimedia, 16(1), 81-93, January-March 2009

- H.K. Ekenel, **B. Sankur**, [Feature selection in the independent component subspace for face recognition](#), Pattern Recognition Letters, 25, 1377–1388, 2004

- H.K. Ekenel, **B. Sankur**, [Multiresolution Face Recognition](#), Image and Vision Computing, 23(5), 469-477, 2005

- M. Reijnders, P. van Beek, **B. Sankur**, J.C.A. van der Lubbe, [Facial Feature Localization and Adaptation of a Generic Face Model for Model Based Coding](#), Signal Processing: Image Communication, vol. 7, 57-75, March 1995

Security: Watermarking, Data Hiding, Anomaly Detection

- M. Yamaç, M. Ahishali, N. Passalis, J. Raitoharju, B. Sankur, M. Gabbouj, Multi-Level Reversible Data Anonymization via Compressive Sensing and Data Hiding; IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY, 16 (2019), 1014-10328.

- M. Semerci, A. T. Cemgil, **B. Sankur**, Discriminative tensor decomposition with large margin, Digital Signal Prıcessing, 5 (2019) 102584

- B. Kurt, C. Yildiz, T. Ceritli, A.T. Cemgil, **B. Sankur**, [A Bayesian Change Point Model for Detecting SIP-based DDoS Attacks](#), Digital Signal Processing, Digital Signal Processing 77 (2018) 48–62

- M. Semerci, A. T. Cemgil, **B. Sankur**, [An Intelligent Cyber Security System Against DDoS Attacks in SIP Networks](#), Computer Networks, Volume 136 (2018) 137-154

- S.M.E. Sahraeian,, M.A. Akhaee, **B. Sankur**, F. Marvasti, [Information Hiding with Maximum Likelihood Detector for Correlated Signals](#), Digital Signal Processing, 36, 144-155, 2015

- Yamaç, Mehmet, Çağatay Dikici, and Bülent Sankur. [Hiding data in compressive sensed measurements: A conditionally reversible data hiding scheme for compressively sensed measurements](#). *Digital Signal Processing* 48 (2016): 188-200

- M. A. Akhaee, S. M. E. Sahraeian, F. Marvasti, **B. Sankur**, Robust Scaling-Based Image Watermarking Using Maximum-Likelihood Decoder with Optimum Strength Factor, IEEE Transactions on Multimedia, 11(5), 822-833, August 2009

- H.M. Meral, E. Sevinç, **B. Sankur**, A. S. Özsoy, T. Güngör, Natural Language Watermarking via Morphosyntactic Alterations, Computer Speech and Language, 23, 107-125, 2009

- O. Çeliktutan, **B. Sankur**, I. Avcıbaş, Blind Identification of Source Cell-phone Model, IEEE Trans. Information Security and Forensics, IEEE IFS-3, 553-566, September 2008

- Sevinç Bayram, Ismail Avcıbaş, **Bülent Sankur**, Nasir Memon, Image Manipulation Detection, Journal of Electronic Imaging, 15(4), Oct-Dec. 2006

- H. Ozer, **B. Sankur**, N. Memon, I. Avcıbaş, Detection of Audio Covert Channels using Statistical Footprints of Hidden Messages, Digital Signal Processing, 16, 389-401, 2006

- B. Coskun, **B. Sankur**, N. Memon, Spatio-Temporal Transform-Based Video Hashing, IEEE Trans. on Multimedia, 8(6), 1190-1208, 2006

- H. Özer, **B. Sankur**, N. Memon, E. Anarım, Perceptual Audio Hashing Functions, EURASIP Journal on Applied Signal Processing 2005:12, 1–14

- Bastug, **B. Sankur**, Improving the Payload of Watermarking Channels via LDPC Coding, IEEE Signal Proc. Letters, 11(2), 90-92, February 2004

- O. Ekici, **B. Sankur**, B. Coskun, U. Naci, M. Akcay, Comparative Assessment of Semifragile Watermarking Methods, Journal of Electronic Imaging, 13(1), 209-216, January 2004

- I. Avcibas, **B. Sankur**, N. Memon, Steganalysis of Watermarking and Steganographic Techniques Using Image Quality Metrics, IEEE Trans. on Image Processing, 12(2), 21-229, 2003

- S. Baudry, J.F. Delaigle, **B. Sankur**, B. Macq, H. Maitre, Analyses of Error Correction Strategies for Typical Communication Channels in Watermarking, Signal Processing, 81(6), 1239-1250, June 2001

Image and Video Processing

- S. Aslan, C. B. Akgül, **B. Sankur**, E. T. Tunalı, Exploring visual dictionaries: A model driven perspective, Journal of Visual Communication and Image Representation 49 (2017) 315–331

- O. Dai, B. Demir, **B. Sankur**, L. Bruzzone, A Novel System for Content-Based Retrieval of Single and Multi-Label High-Dimensional Remote Sensing Images, IEEE J. Selected Topics in Applied Earth Observations and Remote Sensing, 11 (2018), 2473-2490

- S. Aslan, M. Yamac, **B. Sankur**, A DCT-based multiscaled binary descriptor invariant to complex brightness changes, EUSIPCO 2016, Budapest, Hungary

- Y. Cem Sübakan, Barış Kurt, A. Taylan Cemgil, **B. Sankur**, Probabilistic sequence clustering with spectral learning, Digital Signal Processing, 29 (2014), 1-19

- Omer C. Gurol, **B. Sankur**, Burak Acar, Mehmet Guney, Efficient Estimation of Disparity Statistics and their Use as a Predictor for Perceived 3D Video Scene Quality, EURASIP J. on Image and Vision Processing, 2013, 2013:53 (16 September 2013)

- C. B. Akgül, **B. Sankur**, F. Schmitt and Y. Yemez, Similarity Learning for 3D Object Retrieval using Relevance Feedback and Risk Minimization, International Journal of Computer Vision, 89, 392-407, 2010.

- H. Dutağacı, **B. Sankur**, Y. Yemez, Subspace building for retrieval of general 3D models, Computer Vision and Image Understanding, Computer Vision and Image Understanding, 114 (2010), 865–886.

- K. Kayabol, E. Kuruoglu, J. L. Sanz, **B. Sankur**, E. Salerno D. Herranz, Adaptive Langevin Sampler for Separation of t-distribution Modelled Astrophysical Maps, IEEE Transactions on Image Processing, 19(9), 2357-2368, 2010.

- N. Ozay, **B. Sankur**, Automatic TV Logo Detection And Classification In Broadcast Videos, EUSIPCO 2009, Glasgow, U.K.

- K. Kayabol, E. Kuruoglu, **B. Sankur**, Bayesian Separation of Images Modelled with MRFs using MCMC, IEEE Transactions on Image Processing, 18(5), 982-994, 2009.

- Koray Kayabol, Ercan E. Kuruoglu, **Bulent Sankur**, Emanuele Salerno and Luigi Bedini, Fast MCMC Separation for MRF Modelled Astrophysical Components, September, ICIP 2009, Egypt.

- K. Kayabol, E. Kuruoglu, **B. Sankur**, Image Source Separation using Color Channel Dependencies, International Conference on ICA and Signal Separation, March 2009, Brazil.

- C. B. Akgül, **B. Sankur**, F. Schmitt, Y.Yemez, 3D Model Retrieval using Probability Density-Based Shape Descriptors, IEEE Transactions on Pattern Analysis and Machine Intelligence, 31(6), 1117-1133, 2009.

- Ceyhun Burak Akgül, **Bülent Sankur**, Yücel Yemez and Francis Schmitt, Similarity Score Fusion by Ranking Risk Minimization, for 3D Object Retrieval, Shape Modeling International 2008, Crete, Greece.

- K. Kayabol, **B. Sankur**, E. Kuruoğlu, Source Separation in Images via MRFs with Variational Approximation, EUSIPCO'2007, Poznan, Poland

- C.B. Akgül, **B. Sankur**, F. Schmitt, Y. Yemez, Density-Based 3D Shape Descriptors, Eurasip Journal on Applied Signal Processing, Vol. 2007, Article ID 32503

- H. Dutagaci, **B. Sankur**, Transform-based Methods for Indexing and Retrieval of 3D Objects, The 5th International Conference on 3-D Digital Imaging and Modeling, Ottawa, Ontario, June 2005.

- C. Erdem Eroglu, **B. Sankur**, M. Tekalp, Performance Measures for Video Object Segmentation and Tracking, IEEE Image Processing, 13(7), 937-950, July 2004.

- **B. Sankur**, M. Sezgin, A Survey Over Image Thresholding Techniques And Quantitative Performance Evaluation, Journal of Electronic Imaging, 13(1), 146-165, January, 2004. (Available software: OTIMEC with graphic user interface for the execution of several (42) image thresholding algorithms)

- Avcibas, **B. Sankur**, N. Memon, K. Sayood, A successively refinable lossless image coding algorithm, IEEE Trans. Communications, March 2005.

- C. Erdem Eroglu, **B. Sankur**, M. Tekalp, Video Object Tracking with Feedback of Performance Measures, IEEE Circuit Systems and Video Processing, 13(4), 310-324, April 2003.

- M. Sezgin, **B. Sankur**, Image Multithresholding Based on Sample Moment Function, ICIP'2003: International Conference on Image Processing, Barcelona 2003.

- C.E. Eroglu, **B. Sankur**, Performance Measures for Video Object Segmentation and Tracking, SPIE Conf. Visual Communications and Image Processing 2003, Lugano, Switzerland, July 8-11 2003.

- F. Kurugollü, **B. Sankur**, E. Harmanci, Image Segmentation by Relaxation Using Constraint Satisfaction Neural Network, Journal of Image and Vision Computing, 20, 483-497, 2002.

- Avcibas, **B. Sankur**, K. Sayood, Statistical Evaluation of Image Quality Measures, Journal of Electronic Imaging, 11(2), 206-23, April 2002. (Availability software: QUALITY for the calculation of several (26) image quality measures)

- Avcibas, N. Memon, **B. Sankur,**, K. Sayood, Lossless and Near-Lossless Image Compression with Successive Refinement, IEEE Signal Processing Letters, 9(10), 312-314, October 2002.

- V. Letournelle, **B. Sankur**, F. Pradeille, H. Maitre, Feature Extraction for Quality Asessment of Aerial Image Segmentation, ISPRS: International Soc. for Photogrammetry and Remote Sensing, PCV'02 Photogrammetric Computer Vision, 2002.

- F. Kurugollü, **B. Sankur**, E. Harmanci, Multiband Image Segmentation Using Histogram Multithresholding and Fusion, Journal of Image and Vision Computing, 9(13), 915-928, 2001. (Available software: SEGMEN Multithresholding and Constraint Satisfaction NN based segmentation programs).

- S. Oztürk, **B. Sankur**, T. Abak, Font Classification and Recognition in Document Images, Journal of Electronic Imaging, 10(2), 418-430, 2001.

- C. Erdem Eroglu, **B. Sankur**, Performance Evaluation Metrics for Object-Based Video Segmentation, EUSIPCO'2000: 10th European Signal Processing Conference, pp. 917-920, 5-8 September, Tampere, Finland (best paper award).

- Y. Yemez, **B. Sankur**, E. Anarim, A Quadratic Motion-Based Object-Oriented Video Codec, Signal Processing: Image Communication, Vol. 15, pp. 729-766, 2000.

- F.Kurugollü, **B. Sankur**, Image Segmentation Based on Multi-Scan Constraint Satisfaction Neural Network, Pattern Recognition Letters, Vol. 20, pp. 1553-1563, 1999.

- H. Caglar, S. Güntürk, **B. Sankur**, E. Anarim, VQ-Adaptive Block Transform Coding of Images, IEEE Trans. Image Processing, Vol. 7, pp. 110-116, January 1998.

- V.V.Starovoitov, C. Kose, **B. Sankur**, Generalized Distance Based Matching of Nonbinary Images, ICIP'98, Inter. Conference on Image Processing, Chicago, October 4-7, 1998.

- Y. Yemez, T. Aydin, **B. Sankur**, E. Anarim, Multidirectional and Multiscale Edge Detection via M-Band Wavelet Transform, IEEE Trans. Image Processing, Vol. 5, pp. 1370-1377, 1996.

- **B.Sankur**, R.A. van Schijndel, J.C.A. van der Lubbe, Two-Layer Coding for Videotelephone, Signal Processing: Image Communication, 295-303, 1993.

- **B.Sankur**, J.C.A. van der Lubbe, M.F. Carreto Castro, Lossless Coding of Art Images for Museum Information Systems, ISCIS'92: Proc. 7th. International Symposium on Computer and Information Sciences, Antalya, Turkey, Oct. 29-Nov.2, 1992.

Biomedical Signal Processing
- K. Ciftci, **B. Sankur**, A. Akin, Y. Kahya, Multilevel Statistical Inference From Functional Near-Infrared Spectroscopy Data During Stroop Interference, IEEE Trans. on Biomedical Engineering, 55(9), 2212-2220, 2008.

- Koray Ciftci, **Bulent Sankur**, Yasemin P. Kahya and Ata Akin, Constraining the general linear model for sensible hemodynamic response function waveforms, Med Biol Eng Comput, 2008, DOI 10.1007/s11517-008-0347-6.

- C. B. Akgül, A. Akin, **B. Sankur**, Extraction of Cognitive-Related Waveforms from Functional Near Infrared Spectroscopy Signals, Medical and Biological Engineering in Computing, 44(11), 945-958, 2006 (Available software: STAT_TESTS programs for the testing Gaussianity and stationarity of time series and SPLINE programs for spline smoothing)

- C. B. Akgül, **B. Sankur**, A. Akın, The Selection of Relevant Frequency Bands in Functional Near Infrared Spectroscopy, Journal of Computational Neuroscience, 18, 67-83, 2005.

- K. Ciftci, Y. Kahya, **B. Sankur** and A. Akin, Complexity Analysis of Functional Near-Infrared Spectroscopy Signals, EUSIPCO-2005, I, 65-68, 4-8 September, Antalya.

- E. C. Guler, **B. Sankur**, Y. P. Kahya, S. Raudys, Two-stage classification of respiratory sound patterns, Computers in Biology and Medicine, 35, 67-83, 2005.

- C. Güler, **B. Sankur**, Y. Kahya, Visual Classification of Medical Data Using MLP Mapping, Computers in Biology and Medicine, 28, 275-287, 1998.

- C. Güler, **B. Sankur**, Y. Kahya, Multiresolution Biological Transient Extraction Applied to Respiratory Crackles, Computers in Biology and Medicine, Vol.26, pp. 25-39, 1996.

- Buruk, M.Y., Güler, E.Ç., Egi, S.M., Eftedal, O. and **Sankur, B.**, Analysis of precordial Doppler Ultrasound recordings using time-frequency methods to detect decompression bubbles. Undersea Hyperbaric Med., 22, 30-31 (1995).

- **B. Sankur**, Y.P. Kahya, E. C. Güler, T. Engin, Comparison of AR Based Algorithms for Respiratory Sound Classification, Computers in Biology and Medicine, 4, pp. 67 - 76, 1994.

- E.Barendregt, **B.Sankur**, C.Ince, H.A. Bruining, Analysis of Respiratory Sounds During Induced ARDS in Pigs, EMBS'92: 14th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2537-2538, Paris, France, Oct. 29- Nov. 1, 1992.

Digital Signal Processing

- M. Altınkaya, **B. Sankur**, E. Anarım, Phase Dependence Mitigation for Autocorrelation Based Frequency Estimation, Digital Signal Processing, 18 (2008) 249–266.
- V. Valev, **B. Sankur**, Generalized Non-reducible descriptors, Pattern Recognition, 37, 1809-1815, 2004.
- M. Altinkaya, H. Delic, **B. Sankur**, E. Anarim, Subspace-Based Frequency Estimation of Sinusoidal Signals in Alpha-Stable Noise, Signal Processing, 82(11), 151-171, November, 2002.
- H. Caglar, S. Güntürk, E. Anarim, **B. Sankur**, Permutation Based Design of Orthogonal Block Transforms and Filter Banks, Multidimensional Systems and Processing, 12, 63-79, 2001.
- Koksaldi E., **B. Sankur**, S. Seker, Information Extraction from the Radiation of VDU's by Pattern Recognition Methods, EMC'98: Electromagnetic Compatibility Conference, 678-683, Rome, 1998.
- H. Caglar, S. Güntürk, E. Anarim. **B. Sankur**, Matched Block Transform Design Technique, EUSIPCO-96, 8. European Signal Processing Conference, pp. 1155-1158, September 10-13, 1996, Trieste, Italy.
- H. Caglar, O. Alkin, E. Anarim, **B. Sankur**, New Efficient Shuffled Block Transform Design Technique, Electronic Letters, 30, 834-835, May 1994.
- E. Anarim, **B. Sankur**, H. Caglar, I. Celasun, Design of Nonseparable 2-D Linear Phase Filter Banks via Shuffling Operations, Electronic Letters, 30, 843-844, May, 1994.
- K. Harmanci, E. Anarim, H. Caglar, **B. Sankur**, 2-D Nonseparable PR Filter Bank Design Based on Bernstein Polynomial Approximation, SPIE Sym. Visual Communication and Image Processing'94 (Vol. 2308), p. 513-523, 25-28 Sept. 1994, Chicago
- Anarim, E., **Sankur.B.**, Robust Detection by AR Frequency Estimation, Signal Processing 30, 271-277, 1993.
- Caglar, H. , **B. Sankur**, Anarim, E., Matched Wavelet Design and Coding Gain Performance, MDSP'93: 8'th IEEE Conf. on Multidimensional Signal Processing, pp.144-145, Sept. 1993, France.
- Tugbay, N. **B. Sankur**, Classification and Analysis of Digital Modulation Schemes Using Wigner-Ville Distribution, GRETSI'89: Proc. 12. Colloque Gretsi, June 1989, Nice, France.
- Aktar, M., **Sankur.B.**, Y. Istefanopulos, Properties of the Maximum Likelihood and Piserenko Spectral Estimates, Signal Processing, 8, 401-413, (1985).

Communications and Networks

- C. Evci, K. Ciliz, E. Anarim, **B. Sankur**, [Wireless Networks in Turkey: A jewel in the crowd](), Alcatel Telecommunications Review, 3rd Quarter, 2004.

- N. Ince, D. Willemsen, **B. Sankur**, Planning and Architectural Design of Integrated Services Digital Network, Kluwer Academic Publishers, 445 pp., April 1995.

- Kalyoncu, H., **B. Sankur**, Design and Performance Evaluation of Picture Archival and Communication Systems, Simulation, vol. 34, pp. 77-90, February 1995.

- **B.Sankur**, H.Kalyoncu, Estimation of Survivability of Communication Networks, Electronic Letters, 28, 1790-1792, 1992.

- Kalyoncu, H., **B.Sankur**, Traffic Modelling of PACS Systems, ISCIS'90: 5.Int. Symp. Computer and Information Sciences, 1990, Cappadocia.

- Bilgekul, H., **Sankur.B.**, Conditionally Nonparametric Rank Correlation Detector for Random Signal Detection, Archive für Elektronik und Übertrangungstechnik, 35, 192-196, 1981.

- **Sankur, B.**, J.W. Modestino, Receiver Performance in Impulsive Noise, Archive für Elektronik und Übertragungstechnik, 36, 111-118, (1982)

- Modestino, J.W., **B.Sankur**, Modelling and Analysis of Impulsive Noise. Archive für Elektronik and Übertragungtechnick, 35, 481-488 (1981)

- Basar, T. Ü., **B. Sankur**, H. Abut, Performance Bounds and Optimal Linear Coding for Discrete-Time Multichannel Communication Systems, IEEE Trans. Information Theory, IT-26, 212-217, (1980)

- **Sankur, B.**, J.M. Modestino, Modeling and Analysis of Impulse Noise, Proc. NATO Advanced Study Institute on Comm. Systems and Random Process Theory, J.K.Skwirzynksi, Ed. Leyden, Netherlands, A.W. Sijthhoff, 619-636 (1977)