

Prof. Otman A. BASIR

California Institute of Technology (CALTECH), USA

Selected Scholarly Contributions [Data Provided by Scopus]

Drawil, N., Basir, O.

[Modeling the impact of observation conditions on localization systems](#)

(2014) Information Fusion, 15 (1), pp. 19-31.

Hosseini Semnani, S., Basir, O.A.

[Target to sensor allocation: A hierarchical dynamic Distributed Constraint Optimization approach](#)

(2013) Computer Communications, 36 (9), pp. 1024-1038.

Drawil, N.M., Amar, H.M., Basir, O.A.

[GPS localization accuracy classification: A context-based approach](#)

(2013) IEEE Transactions on Intelligent Transportation Systems, 14 (1), art. no. 6295661, pp. 262-273.

Quddus, A., Basir, O.

[Semantic image retrieval in magnetic resonance brain volumes](#)

(2012) IEEE Transactions on Information Technology in Biomedicine, 16 (3), art. no. 6159087, pp. 348-355.

El-Ghazal, A., Basir, O., Belkasim, S.

[Invariant curvature-based Fourier shape descriptors](#)

(2012) Journal of Visual Communication and Image Representation, 23 (4), pp. 622-633.

Tabibazar, A., Basir, O.

[Energy-efficient compressive state recovery from sparsely noisy measurements](#)

(2012) IEEE Transactions on Instrumentation and Measurement, 61 (9), art. no. 6184309, pp. 2392-2400.

Tabibazar, A., Basir, O.

[Compressive sensing indoor localization](#)

(2011) Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics, art. no. 6083963, pp. 1986-1991.

Freeman, C., Kulić, D., Basir, O.

[Joint feature selection and hierarchical classifier design](#)

(2011) Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics, art. no. 6083921, pp. 1728-1734.

Tabibiazar, A., Basir, O.
[Kernel-based optimization for traffic density estimation in ITS](#)
(2011) IEEE Vehicular Technology Conference, art. no. 6093194, .

Tabibiazar, A., Basir, O.
[Kernel-based modeling and optimization for density estimation in transportation systems using floating car data](#)
(2011) IEEE Conference on Intelligent Transportation Systems, Proceedings, ITSC, art. no. 6083098, pp. 576-581.

Drawil, N., Amar, H., Basir, O.
[A solution to the ill-conditioned GPS accuracy classification problem: Context based classifier](#)
(2011) 2011 IEEE GLOBECOM Workshops, GC Wkshps 2011, art. no. 6162344, pp. 1077-1082.

Mousavi, P., Miners, B., Basir, O.
[L-shaped monopole slot antenna for circular polarization](#)
(2011) IEEE Antennas and Propagation Society, AP-S International Symposium (Digest), art. no. 5996393, pp. 796-797.

Alasmary, W., Basir, O.
[Achieving efficiency and fairness in 802.11-based vehicle-to-infrastructure Communications](#)
(2011) IEEE Vehicular Technology Conference, art. no. 5956593, .

Hilal, A.R., Khamis, A., Basir, O.
[A Holonic Federated Sensor Management Framework for pervasive surveillance systems](#)
(2011) 2011 IEEE International Systems Conference, SysCon 2011 - Proceedings, art. no. 5929110, pp. 361-366.

Hilal, A.R., Khamis, A., Basir, O.
[A service-oriented architecture suite for sensor management in distributed surveillance systems](#)
(2011) 2011 International Conference on Computer and Management, CAMAN 2011, art. no. 5778820, .

Hilal, A.R., Khamis, A., Basir, O.
[HASM: A hybrid architecture for sensor management in a distributed surveillance context](#)
(2011) 2011 International Conference on Networking, Sensing and Control, ICNSC 2011, art. no. 5874929, pp. 492-497.

Mooman, A.A., Basir, O., Younes, A.

[Architecture design: Building specialized domain ontologies using an intelligent model and topic model](#)

(2011) Proceedings of the 11th IASTED International Conference on Artificial Intelligence and Applications, AIA 2011, pp. 244-252.

Tabibiazar, A., Basir, O.

[Bimodal localization in cellular networks utilizing particle filters](#)

(2010) 13th Conference on Information Fusion, Fusion 2010, art. no. 5711942, .

Tabibiazar, A., Basir, O.

[Radio-visual signal fusion for localization in cellular networks](#)

(2010) IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems, art. no. 5604469, pp. 150-155.

Mooman, A., Basir, O., Younes, A.

[An intelligent model to construct specialized domain ontologies](#)

(2010) Proceedings - 2010 3rd IEEE International Conference on Computer Science and Information Technology, ICCSIT 2010, 5, art. no. 5564016, pp. 696-702.

Mousavi, P., Miners, B., Basir, O.

[Wideband L-shaped circular polarized monopole slot antenna](#)

(2010) IEEE Antennas and Wireless Propagation Letters, 9, pp. 822-825.

Li, H., Karray, F., Basir, O.

[A framework for coordinated control of multi-agent systems](#)

(2010) Studies in Computational Intelligence, 310, pp. 43-67.

Drawil, N.M., Basir, O.

[Intervehicle-communication-assisted localization](#)

(2010) IEEE Transactions on Intelligent Transportation Systems, 11 (3), art. no. 5464357, pp. 678-691.

Mohamed, A.A., Basir, O.

[A new fuzzy adaptive approach for fault identification in computer networks](#)

(2010) Proceedings of the 10th IASTED International Conference on Artificial Intelligence and Applications, AIA 2010, pp. 279-286.

Mohamed, A.A., Basir, O.

[An adaptive multi-agent approach for distributed alarm correlation and fault identification](#)

(2010) Proceedings of the 9th IASTED International Conference on Parallel and Distributed Computing and Networks, PDCN 2010, pp. 127-134.

Mohamed, A.A., Basir, O.

[Fusion based approach for distributed alarm correlation in computer networks](#)

(2010) 2nd International Conference on Communication Software and Networks, ICCSN 2010, art. no. 5437682, pp. 318-324.

Li, H., Karray, F., Basir, O.

[An optimization algorithm for the coordinated hybrid agent framework](#)

(2010) International Journal of Robotics and Automation, 25 (1), pp. 26-37.

Reddy, B.S., Basir, O.A.

[Concept-based evidential reasoning for multimodal fusion in human-computer interaction](#)

(2010) Applied Soft Computing Journal, 10 (2), pp. 567-577.

Saleet, H., Basir, O., Langar, R., Boutaba, R.

[Region-based location-service-management protocol for VANETs](#)

(2010) IEEE Transactions on Vehicular Technology, 59 (2), art. no. 5272140, pp. 917-931.

Rae, A., Khamis, A., Basir, O., Kamel, M.

[Particle filtering for bearing-only audio-visual speaker detection and tracking](#)

(2009) 3rd International Conference on Signals, Circuits and Systems, SCS 2009, art. no. 5412478, .

Vaqar, S.A., Basir, O.

[Traffic pattern detection in a partially deployed vehicular Ad Hoc network of vehicles](#)

(2009) IEEE Wireless Communications, 16 (6), art. no. 5361177, pp. 40-46.

Saleet, H., Basir, O.

[Location services management in intelligent transportation systems](#)

(2009) TIC-STH'09: 2009 IEEE Toronto International Conference - Science and Technology for Humanity, art. no. 5444479, pp. 334-339.

Hilal, A.R., Basir, O.

[Uniform illumination constraint enhancement and utility weighted voting fusion for ultrasonic breast lesion segmentation](#)

(2009) 2009 IEEE Biomedical Circuits and Systems Conference, BioCAS 2009, art. no. 5372040, pp. 233-236.

Al-Shawa, M., Basir, O.

[Constrained rationality: Formal goals-reasoning approach to strategic decision & conflict analysis](#)

(2009) Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics, art. no. 5346292, pp. 1439-1445.

Drawil, N., Basir, O.

[Toward increasing the localization accuracy of vehicles in VANET](#)

(2009) ICVES 2009 - 2009 IEEE International Conference on Vehicular Electronics and Safety, art. no. 5400326, pp. 13-18.

Hilal, A.R., Basir, O.

[Combination of enhanced adaboosting techniques for the characterization of breast cancer tumors](#)

(2009) FBIE 2009 - 2009 International Conference on Future BioMedical Information Engineering, art. no. 5405794, pp. 568-571.

El-ghazal, A., Basir, O., Belkasim, S.

[Scale invariants of radial tchebichef moments for shape-based image retrieval](#)

(2009) ISM 2009 - 11th IEEE International Symposium on Multimedia, art. no. 5363254, pp. 318-323.

Quddus, A., Basir, O., Karray, F.

[Wavelet-based image registration and alignment for image retrieval using mutual information and fuzzy logic](#)

(2009) Proceedings of the 6th IASTED International Conference on Signal Processing, Pattern Recognition and Applications, SPPRA 2009, pp. 13-18.

Riyaz, S.H., Basir, O.

[Intelligent planning and execution of tasks using hybrid agents](#)

(2009) 2009 International Conference on Artificial Intelligence and Computational Intelligence, AICI 2009, 1, art. no. 5376142, pp. 277-282.

Quddus, A., Basir, O.

[Wavelet based MR 2D slice retrieval in 3D volumes](#)

(2009) TIC-STH'09: 2009 IEEE Toronto International Conference - Science and Technology for Humanity, art. no. 5444439, pp. 545-550.

Saleet, H., Langar, R., Basir, O., Boutaba, R.

[Adaptive message routing with QoS support in vehicular Ad Hoc networks](#)

(2009) GLOBECOM - IEEE Global Telecommunications Conference, art. no. 5425635, .

Almahorg, K., Basir, O.

[Performance evaluation of MANETs virtual backbone formation algorithms](#)

(2009) Proceedings - IEEE Symposium on Computers and Communications, art. no. 5202319, pp. 787-792.

Saleet, H., Langar, R., Basir, O., Boutaba, R.

[A distributed approach for location lookup in vehicular ad hoc networks](#)

(2009) IEEE International Conference on Communications, art. no. 5198596, .

Rae, A., Basir, O.

[Reducing multipath effects in vehicle localization by fusing GPS with machine vision](#)

(2009) 2009 12th International Conference on Information Fusion, FUSION 2009, art. no. 5203810, pp. 2099-2106.

Mohamed, A.A., Basir, O.

[A new probing scheme for fault detection and identification](#)

(2009) Proceedings of 2009 IEEE International Conference on Electro/Information Technology, EIT 2009, art. no. 5189590, pp. 90-95.

El-ghazal, A., Basir, O., Belkasim, S.

[Farthest point distance: A new shape signature for Fourier descriptors](#)

(2009) Signal Processing: Image Communication, 24 (7), pp. 572-586.

Ameer, S., Basir, O.

[Image compression using plane fitting with inter-block prediction](#)

(2009) Image and Vision Computing, 27 (4), pp. 385-390.

Zhao, B., Basir, O.A., Mittal, G.S.

[Detection of occluded small objects in glass bottles filled with beverages via ultrasound center frequency tracing](#)

(2009) LWT - Food Science and Technology, 42 (1), pp. 162-167.

Ameer, S., Basir, O.

[Objective image quality measure based on weber-weighted mean absolute error](#)

(2008) International Conference on Signal Processing Proceedings, ICSP, art. no. 4697233, pp. 728-732.

Almahorg, K., Basir, O.

[Simulation-based performance comparison of VANETs backbone formation algorithms](#)

(2008) Proceedings - 12th 2008 IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications, DS-RT 2008, art. no. 4700125, pp. 236-242.

El-Ghazal, A., Basir, O., Belkasim, S.

[A context-based fusion algorithm for shape retrieval](#)

(2008) Proceedings of the 11th International Conference on Information Fusion, FUSION 2008, art. no. 4632332, .

Drawil, N., Basir, O.

[Vehicular collaborative technique for location estimate correction](#)

(2008) IEEE Vehicular Technology Conference, art. no. 4657084, .

El-ghazal, A., Basir, O., Belkasim, S.

[A novel curvature-based shape fourier descriptor](#)

(2008) Proceedings - International Conference on Image Processing, ICIP, art. no. 4711914, pp. 953-956.

Saleet, H., Langar, R., Basir, O., Boutaba, R.

[Proposal and analysis of region-based location service management protocol for VANETs](#)

(2008) GLOBECOM - IEEE Global Telecommunications Conference, art. no. 4697876, pp. 491-496.

Quddus, A., Basir, O.

[Wavelet-based medical image registration for retrieval applications](#)

(2008) BioMedical Engineering and Informatics: New Development and the Future - Proceedings of the 1st International Conference on BioMedical Engineering and Informatics, BMEI 2008, 2, art. no. 4549183, pp. 301-305.

Makkook, M., Basir, O., Karray, F.

[A reliability guided sensor fusion model for optimal weighting in multimodal systems](#)

(2008) ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings, art. no. 4518144, pp. 2453-2456.

Ameer, S., Basir, O.

[Image compression through optimized linear mapping and parametrically generated features](#)

(2008) 2008 3rd International Symposium on Communications, Control, and Signal Processing, ISCCSP 2008, art. no. 4537345, pp. 867-870.

Ameer, S., Basir, O.

[Modifying weber fraction law to postprocessing and edge detection applications](#)

(2008) 2008 3rd International Symposium on Communications, Control, and Signal Processing, ISCCSP 2008, art. no. 4537346, pp. 871-875.

Li, H., Karray, F., Basir, O., Song, I.

[A framework for coordinated control of multiagent systems and its applications](#)

(2008) IEEE Transactions on Systems, Man, and Cybernetics Part A:Systems and Humans, 38 (3), pp. 534-548.

Ahmad, A.-R., Basir, O., Hassanein, K., Azam, S.

[An intelligent expert systems' approach to layout decision analysis and design under uncertainty](#)

(2008) Studies in Computational Intelligence, 97, pp. 321-364.

Correia, L.R., Mittal, G.S., Basir, O.A.

[Ultrasonic detection of bone fragment in mechanically deboned chicken breasts](#)

(2008) Innovative Food Science and Emerging Technologies, 9 (1), pp. 109-115.

Saleet, H., Basir, O.

[Location-based message aggregation in vehicular ad hoc networks](#)

(2007) GLOBECOM - IEEE Global Telecommunications Conference, art. no. 4437821, .

Rae, A., Basir, O.

[Fusion of GPS and machine vision for absolute vehicle positioning](#)

(2007) American Society for Photogrammetry and Remote Sensing - ASPRS Annual Conference 2007: Identifying Geospatial Solutions, 2, pp. 574-579.

Rae, A., Basir, O.

[Improving vehicle positioning and visual feature estimates through mutual constraint](#)

(2007) IEEE Conference on Intelligent Transportation Systems, Proceedings, ITSC, art. no. 4357638, pp. 778-783.

El-ghazal, A., Basir, O., Belkasim, S.

[A consensus-based fusion algorithm in shape-based image retrieval](#)

(2007) FUSION 2007 - 2007 10th International Conference on Information Fusion, art. no. 4408090, .

Vaqar, S.A., Basir, O.

[Information theory based traffic pattern detection in mobile ad hoc network of vehicles](#)

(2007) ITST 2007 - 7th International Conference on Intelligent Transport Systems Telecommunications, Proceedings, art. no. 4295865, pp. 217-222.

Vaqar, S.A., Basir, O.

[Smart protocol for communication in mobile ad hoc network of vehicles](#)

(2007) ITST 2007 - 7th International Conference on Intelligent Transport Systems Telecommunications, Proceedings, art. no. 4295831, pp. 46-51.

El-ghazal, A., Basir, O., Belkasim, S.

[Shape-based image retrieval using pair-wise candidate co-ranking](#)

(2007) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 4633 LNCS, pp. 650-661.

Srinath Reddy, B., Basir, O.A., Leat, S.J.

[Estimation of driver attention using visually evoked potentials](#)

(2007) IEEE Intelligent Vehicles Symposium, Proceedings, art. no. 4290179, pp. 588-593.

Younes, A., Basir, O., Calamai, P.

[A hybrid evolutionary approach for combinatorial problems in dynamic environments](#)

(2007) Canadian Conference on Electrical and Computer Engineering, art. no. 4055068, pp. 1595-1600.

Makkook, M., Basir, O.

[Visual speech understanding using independent component analysis](#)

(2007) Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics, art. no. 4413708, pp. 2551-2556.

Rae, A., Basir, O.

[A framework for visual position estimation for motor vehicles](#)

(2007) 4th Workshop on Positioning, Navigation and Communication 2007, WPNC'07 - Workshop Proceedings, art. no. 4167844, pp. 223-228.

Miners, B.W., Basir, O.A., Karray, F.

[Intelligent object feature identification using a mobile sonar rangefinder](#)

(2007) Intelligent Automation and Soft Computing, 13 (3), pp. 247-262.

Basir, O., Yuan, X.

[Engine fault diagnosis based on multi-sensor information fusion using Dempster-Shafer evidence theory](#)

(2007) Information Fusion, 8 (4), pp. 379-386.

Khoury, R., Karray, F., Sun, Y., Kamel, M., Basir, O.

[Semantic understanding of general linguistic items by means of fuzzy set theory](#)

(2007) IEEE Transactions on Fuzzy Systems, 15 (5), pp. 757-771.

Miners, B., Basir, O.A.

[Towards understanding expression for tele-operation](#)

(2007) International Journal of Computer Applications in Technology, 29 (1), pp. 63-70.

Yang, P., Zhao, B., Basir, O.A., Mittal, G.S.

[Measures of similarity and detection of miniature foreign bodies in packaged foods](#)

(2007) Food Research International, 40 (6), pp. 742-747.

Shahir, S., Basir, O., Kamel, M.

[Stand-alone embedded vision system based on fuzzy associative database](#)

(2007) Image and Vision Computing, 25 (7), pp. 1165-1173.

Zhao, B., Basir, O.A., Mittal, G.S.

[Maximum components integration for image processing: An application of ultrasound for detection of small objects in containers](#)

(2007) Journal of Food Process Engineering, 30 (3), pp. 393-405.

Zhao, B., Basir, O.A., Mittal, G.S.

[Hybrid of multi-signal processing methods for detection of small objects in containers filled with beverages using ultrasound](#)

(2007) LWT - Food Science and Technology, 40 (4), pp. 655-660.

Ellabib, I., Calamai, P., Basir, O.

[Exchange strategies for multiple Ant Colony System](#)

(2007) Information Sciences, 177 (5), pp. 1248-1264.

Shaban, K., Basir, O., Kamel, M.

[Document mining based on semantic understanding of text](#)

(2006) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 4225 LNCS, pp. 834-843.

Ameer, S., Basir, O.

[A simple three-parameter surface fitting scheme for image compression](#)

(2006) VISAPP 2006 - Proceedings of the 1st International Conference on Computer Vision Theory and Applications, 1, pp. 101-106.

El-ghazal, A., Basir, O., Belkasim, S.

[A new shape signature for fourier descriptors](#)

(2006) Proceedings - International Conference on Image Processing, ICIP, 1, art. no. 4378916, pp. I161-I164.

Tsui, P.P.C., Basir, O.A.

[Wavelet basis selection and feature extraction for shift invariant ultrasound foreign body classification](#)

(2006) Ultrasonics, 45 (1-4), pp. 1-14.

Kohandani, A., Basir, O., Kamel, M.

[A fast algorithm for template matching](#)

(2006) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 4142 LNCS, pp. 398-409.

Zhu, H., Basir, O.

[Fuzzy sets theory based region merging for robust image segmentation](#)

(2006) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 3613 LNBI, pp. 426-435.