# Curriculum Vitae of Ramazan S. Aygün

### **CONTACT INFORMATION**

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#### **RESEARCH INTERESTS**

Data Science, Data Mining, Big Data Analytics, Bioinformatics, Data Analytics for Protein Crystallization, Querying & Indexing, Computer Vision, Video & Image Processing, Multimedia Systems, Multimedia Information Retrieval, Multimedia Databases, Multimedia Networking & Synchronization

#### **EDUCATION**

- B.S., Computer Engineering and Information Science, Bilkent University, Ankara, Turkey, 1996 *Graduation Project:* Performance of Nested Transaction Model in Active Database Systems
- M.S., Computer Engineering, Middle East Technical University, Ankara, Turkey, 1998 Thesis: Design and Implementation of Multimedia Database Applications
- Ph.D., Computer Science and Engineering, State University of New York at Buffalo, May 2003 *Dissertation:* Spatio-temporal Browsing of Multimedia Presentations *Committee:* Prof. Aidong Zhang. Advisor; Prof. Bharat Jayaraman; Prof. Jan Chomicki

EMPLOYMENT						
NONACADEMIC PROFESSIONAL EXPERIENCE						
1997-1998	Part-Time Employee	The council of ASELSAN, The Scientific and Technical Research Council of Turkey, METU and STM				
1997-1998	Part-Time Employee	The Scientific and Technical Research Council of Turkey				
ACADEMIC EXPERIEN	CE					
1996-1998	Teaching Assistant	Department of Computer Engineering Middle East Technical University, Ankara, Turkey				
1998-1999	Teaching Assistant	Department of Computer Science and Engineering State University of New York at Buffalo				
Summer 1999	Research Assistant	Database and Multimedia Group State University of New York at Buffalo, Buffalo, NY				
2000-2003	Research Assistant	Database and Multimedia Group State University of New York at Buffalo, Buffalo, NY				
2003 to 2009	Assistant Professor	Computer Science Department University of Alabama in Huntsville, Huntsville, AL				
2009 to date	Associate Professor	Computer Science Department University of Alabama in Huntsville, Huntsville, AL				

# RESEARCH GRANTS AND CONTRACTS RECEIVED

My total funding for my funded proposals is \$1,059,220 (\$925,499 external and \$133,721 internal).

#### FEDERAL GRANTS

Title	Authors	Role	Agency	Amount	Period
NASA LCROSS Workshop Travel Grant	Aygun	PI	USRA	\$500	Feb 29, 2008
III-COR-Small: Developing Novel Mosaic Generation Methods for Object-Based Multimedia Information Systems	Aygun	PI	NSF	\$189,941	2008-2010
STTR/ Fluorescence Intensity-based Scoring of Macromolecule Plates	Aygun, Pusey	PI (at UAH)	iXpressgenes (through NIH)	\$34,970	2010
(REU Supplement) III-COR-Small: Developing Novel Mosaic Generation Methods for Object-Based Multimedia Information Systems	Aygun	PI	NSF	\$16,000	2012
STTR Phase II/Fluorescence Intensity-based Scoring of Macromolecule Crystallization Plates	Aygun, Pusey	PI (at UAH)	iXpressGenes (through NIH)	\$300,000	2013-2015
REU Site: Fundamental Research Topics Related to Unmanned Systems	Fahimi, Aygun	Co-PI	NSF	\$297,792	2014-2017
STTR/Macromolecule Crystallization Screening Results Analysis	Aygun, Pusey	PI at UAH	iXpressGenes (through NIH)	\$50,000	2015-2016

### STATE GRANTS

Title	Authors	Role	Agency	Amount	Period
Alabama Open Meetings Act Web Application	Aygun	PI	Secretary of State	\$18,046	August 2005- September 2005
A/ACHE/EPSCoR/GRSP 2010-2011-Y.Chen	Aygun	PI	ALEpscor	\$18,750	2011

### UNIVERSITY GRANTS

Title	Authors	Role	Agency	Amount	Period
The development of new courses in multimedia systems	Aygun	PI	UAH (Summer instructional Minigrant)	\$2723	Summer 2004
Solving Image Puzzles from Pictures Taken by Robots	Aygun	PI	UAH (Research Mini-Grant)	\$3,559	January-Sep. 2007
Developing a Robot that Tracks Disappearing Objects	Aygun	PI	UAH-REU	\$3000	Summer 2008
UAH Ph.D. Teaching Assistantship Enhancement Program Application for the Department of Computer Science	Newman, Aygun, Zhang	Comm. member	UAH	2 PhD GTA support	
An Infrastructure for Cybersecurity and Privacy Research in the Post-PC era	Zhu, Aygun, Etzkorn, Kim	Co-PI*	UAH	\$114,439	2014-2015
Human-Robot Cooperation via Artificial Robotic Vision	Fahimi, Aygun	Co-PI	UAH-CCFR	\$5,000	2015
Human-Robot Cooperation via Artificial Robotic Vision (Renewal)	Fahimi, Aygun	Co-PI	UAH-CCFR	\$5,000	2015-2016

### RESEARCH, CREATIVE, AND SCHOLARLY ACTIVITY

#### **BOOK CHAPTERS**

- Aidong Zhang, Ramazan Savas Aygun, and Yuqing Song. "Streaming Multimedia Presentations in Distributed Multimedia Database Environments", in Handbook of Video Databases: Design and Applications, CRC Press, 2003, pp. 807-829
- 2. Aidong Zhang, Ramazan Savas Aygun, and Yuqing Song. "Feature-based retrieval in visual database systems", in Multimedia Information Retrieval and Management: Technological Fundamentals and Applications, Springer-Verlag, 2003
- 3. Aidong Zhang, Lei Zhu, Ramazan Aygun, Gholam Sheikholeslami, Yuqing Song. "Image Databases" in Handbook of Database Technologies, Chapman & Hall/CRC Press, to appear in 2009
- 4. Imren Dinc, Semih Dinc, Madhav Sigdel, Madhu S. Sigdel, Marc L. Pusey, Ramazan S. Aygun," DT-Binarize: A Decision Tree Based Binarization for Proteins", Emerging Trends in Image Processing, Computer Vision, and Pattern Recognition, 2015.
- 5. Madhav Sigdel, Madhu S. Sigdel, Imren Dinc, Semih Dinc, Marc L. Pusey, Ramazan S. Aygun, "Automatic Classification of Protein Crystal Images", Emerging Trends in Image Processing, Computer Vision, and Pattern Recognition, 2015.

#### REFEREED JOURNAL ARTICLES

	Paper	Publisher	2014 Journal Impact Factor
1	Markus Mielke, Ramazan Savas Aygun, Yuqing Song, and Aidong Zhang. "PLUS: Probe-Loss Utilization Streaming Mechanism for Distributed Multimedia Presentation Systems", IEEE Transactions on Multimedia, December 2002, pp. 561-577	IEEE Transactions	2.303
2	Ramazan Savas Aygun and Adnan Yazici. "Modeling and Management of Fuzzy Information in Multimedia Database Applications", Multimedia Tools and Applications: An International Journal, Vol. 24(1), September 2004, pp. 29-56	Springer	1.346
3	Ramazan Savas Aygun and Aidong Zhang. "SynchRuler: Rulebased Flexible Synchronization Modeling with Model Checking" IEEE Transactions on Knowledge and Data Engineering, Vol. 17(12), December 2005, pp. 1706-1720.	IEEE Transactions	2.067
4	Ramazan Savas Aygun and Aditya Patil. "PressBase: A presentation synchronization database for distributed	IEEE Transactions	2.303

	multimedia systems" IEEE Transactions on Multimedia, Vol. 8(2), April 2006, 289-296		
5	Khalid Darabkh and Ramazan Aygün, "TCP Traffic Control Evaluation and Reduction over Wireless Networks Using Parallel Sequential Decoding Mechanism," EURASIP Journal on Wireless Communications and Networking, vol. 2007, Article ID 52492, 16 pages, 2007. doi:10.1155/2007/52492	Hindawi	0.724
6	Kemal Akkaya, Murat Demirbas, and R. Savas Aygun. "The Impact of Data Aggregation on the Performance of Wireless Sensor Networks", Wireless Communications and Mobile Computing, Volume 8, Issue 2, February 2008, pp. 171-193, DOI: 10.1002/wcm.454	Wiley	0.858
7	Preti Jain, Puneet Wadhwa, Ramazan Aygun, and Gopi Podila. "Vector–G: Multi-Modular SVM-Based Heterotrimeric G-Protein Prediction" In Silico Biol. 8, 0013 (2008)	IOS Press	N.A.
8	Donna M. Carter, Ramazan Aygun, Glenn Cox, Mary Ellen Weisskopf, and Letha Etzkorn. "The Effect of Uncontrolled Concurrency on Model Checking" Concurrency and Computation: Practice and Experience, Vol. 20, Issue 12, pp. 1419-1438, August 2008	Wiley	0.997
9	Ramazan S. Aygun. "S2S: structural-to-syntactic matching similar documents," Knowledge and Information Systems, Vol. 16, Number 3, pp. 303-329, September 2008	Springer	1.782
10	Tarun Yadav and Ramazan S. Aygun. "I-Quest: an Intelligent QUEry STructuring based on user browsing feedback for semantic retrieval", Multimedia Tools Appl. 43, 2 (Jun. 2009), 145-178.	Springer	1.346
11	Vani Jain and Ramazan S. Aygun. "Spatio-Temporal Querying of Video Content Using SQL for Quantizable Video Databases," Journal of Multimedia, Vol. 4, No. 4, pp. 215-227, August 2009	Academy Publisher	N.A.
12	Ramazan S. Aygün, Yi Ma, Kemal Akkaya, Glenn Cox and Ali Bicak. "A conceptual model for data management and distribution in peer-to-peer systems," Peer-to-Peer Networking and Applications Vol. 3, No. 4, pp. 294-322, 2010	Springer	0.632
13	Y Chen and Ramazan S. Aygun. "Synthetic Video Generation for Evaluation of Sprite Generation," 2010 International Journal of Multimedia Data Engineering and Management (IJMDEM), Vol. 1, No. 2, pp. 34-61, 2010	IGI Global	N.A.
14	K. Darabkeh and Ramazan S. Aygun. "Improving UDP performance using intermediate QoD-aware hop system for wired/wireless multimedia communications systems," International Journal of Network Management, DOI: 10.1002/nem.768, Vol. 21, No. 5, pp. 432-454, 2011	Wiley	0.283
15	Jacob Hauenstein, Ramazan Tinaztepe, Ramazan Aygun: 'You Can Run, but You Cannot Hide': Tracking Objects that leave the Field- of-View. International Journal of Information Technology and Decision Making 11(1): 11-31 (2012)	World Scientific	1.406

16	M. Naik, M. Sigdel, and R. Aygun. "Spatio-Temporal Querying Recurrent Multimedia Databases Using a Semantic Sequence State Graph Multimedia Systems," Multimedia Systems Journal, Vol. 18, Issue 3, pp. 263-281, June 2012	Springer	0.619
17	Yi Chen, Abhidnya A. Deshpande, and Ramazan S. Aygüun. 2012. Sprite generation using sprite fusion. ACM Trans. Multimedia Comput. Commun. Appl. 8, 2, Article 22 (May 2012), 24 pages.	ACM Transactions	0.971
18	M. Sigdel, M. Pusey, and R. Aygun. "Real-Time Protein Crystallization Image Acquisition and Classification System," Crystal Growth & Design, 13(7), 2013. DOI: 10.1021/cg3016029	ACS	4.891
19	Y. Chen, R.S. Aygun. "SpriteCam: virtual camera control using sprite," Multimedia Tools and Applications, October 2013. DOI: 10.1007/s11042-013-1711-6	Springer	1.346
20	Begum, S.; Aygun, R.S., " Greedy Hierarchical Binary Classifiers for Multi-class Classification of Biological Data," Network Modeling Analysis in Health Informatics and Bioinformatics, 3:53, Feb 2014. DOI: 10.1007/s13721-014-0053-2	Springer	N.A.
21	V. Bettaiah, R. Aygun. "Query-by-Gaming: Interactive Spatio- Temporal Querying and Retrieval Using Gaming Controller," Journal of Visual Languages and Computing, Vol 29, August 2015, pp. 63-76. doi:10.1016/j.jvlc.2015.03.003	Elsevier	0.893
22	M. S. Sigdel, M. Sigdel, S. Dinç, I. Dinc, M. L. Pusey and R. S. Aygün, "FocusALL: Focal Stacking of Microscopic Images Using Modified Harris Corner Response Measure," in IEEE/ACM Transactions on Computational Biology and Bioinformatics, vol. 13, no. 2, pp. 326-340, March-April 1 2016. doi: 10.1109/TCBB.2015.2459685	IEEE Transactions	1.438
23	Sigdel, Madhav; Pusey, Marc; Aygun, Ramazan. CrystPro: Spatiotemporal Analysis of Protein Crystallization Images. <i>Crystal Growth &amp; Design, 2015, 15 (11), pp 5254–5262</i>	ACS	4.891
24	Aygun, R. S., Kandadi, H. SEAL: A Divide-and-Conquer Approach For Sequence Alignment. <i>Network Modeling Analysis in Health Informatics and Bioinformatics</i> . December 2015, 4:25	Springer	N.A.
25	Woo, D., Aygun, R. S. "Unsupervised Speaker Identification For TV News," in <i>IEEE MultiMedia</i> , vol.PP, no.99, pp.1-1, doi: 10.1109/MMUL.2016.3	IEEE	1.694
26	Dinc, Semih; Fahimi, Farbod; Aygun, Ramazan: 'Vision-based trajectory tracking for mobile robots using Mirage pose estimation method', <i>IET Computer Vision</i> , 2016, DOI: 10.1049/iet-cvi.2015.0153	IET Computer Vision	0.963
27	Dinc, I., Dinc, S., Sigdel, M., Sigdel, M., Pusey, M., Aygun, R. S., "Super-thresholding: Supervised Thresholding of Protein Crystal Images," in <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , vol.PP, no.99, pp.1-1. doi: 10.1109/TCBB.2016.2542811	IEEE Transactions	1.438

28	Dinc I, Pusey M, Aygun Ramazan. "Optimizing Associative	IEEE	2.309
	Experimental Design for Protein Crystallization Screening," in IEEE	Transactions	
	Transactions on NanoBioscience, vol.PP, no.99, pp.1-1. doi:		
	10.1109/TNB.2016.2536030		

### SUBMITTED JOURNAL PAPERS UNDER REVIEW OR IN PREPARATION

	Paper	Publisher	Status
1	Dinc, S., Fahimi, F., Aygun, R. S. Mirage: An O(n) time Analytical Solution to 3D Camera Pose Estimation with Multi-Camera Support. <i>Robotica</i>	Cambridge University Press	Under review
2	Madhav Sigdel, Imren Dinc, Madhu Sigdel, Semih Dinc, Marc Pusey, Ramazan Aygun. Feature Analysis for Classification of Protein Crystallization Trial Images.	TBD	To Be Submitted
3	Dinc, I., Pusey, M., Aygun, R. S. Visual-X2: a visualization program of crystallization trial images for Crystal X2 platform. Journal of Applied Crystallography.	IUCR	Under review
4	Aygun, R. S. Using Maximum Subarrays for Approximate String Matching. Information Processing Letters.	Elsevier	Under review
5	Karabiyik, U., Canbaz, A., Aksoy, A., Tuna, T., Akbas, E., Gonen, B., Aygun, R. S. A Survey of Social Network Forensics. International Journal of Digital Crime and Forensics.	IGI Global	Under review
6	Tuna, T., Akbas, E., Aksoy, A., Canbaz, A., Gonen, B., Karabiyik, U., Aygun, R. S. User Characterization for Online Social Networks. Social Network Analysis and Mining.	Springer	Under review

#### ABSTRACTS AND PAPERS DELIVERED AT PROFESSIONAL MEETINGS

	Paper	Publisher
1	S. Aygun, A. Yazici, and N. Arica, ``Conceptual Data Modeling of Multimedia Database Applications'', The proceedings of the 4th International Workshop on Multi-Media Database Management Systems, pp. 182-189, Dayton, Ohio, August 1998	IEEE
2	Markus Mielke, Yuqing Song, Ramazan Aygun, Aidong Zhang, "NetMedia: Giving Control to Distributed Multimedia Presentation Systems" (Demonstration). 11th International Conference on Scientific and Statistical Database Management, Proceedings, Cleveland, Ohio, USA, 28-30 July, 1999, pp. 276	IEEE
3	Ramazan S. Aygun and Aidong Zhang. "Interactive multimedia presentation management in distributed multimedia systems", Proc. of Int. Conf. on Information Technology: Coding and Computing, Las Vegas, April, 2001, pp. 275-279	IEEE
4	Ramazan S. Aygun and Aidong Zhang. "Stationary background generation from MPEG compressed video sequences", 2001 IEEE International Conference on Multimedia and Expo, Tokyo, August, 2001, pp. 908-911	IEEE

5	Ramazan S. Aygun. "An integrated framework for interactive multimedia presentations in distributed multimedia systems" (Doctoral Symposium), 2001 ACM Multimedia Conference, Ottawa, Canada, 2001, pp. 457-458	
6	Ramazan S. Aygun and Aidong Zhang. "Middle-Tier for Multimedia Synchronization" (Short Paper), 2001 ACM Multimedia Conference, Ottawa, Canada, 2001, pp. 471-474	ACM
7	Ramazan Savas Aygun and Aidong Zhang. "Modeling and Verification of Interactive Flexible Multimedia Presentations Using PROMELA/SPIN", 9th International SPIN Workshop on Model Checking of Software, Grenoble, France, April 2002, pp. 205-212	Springer
8	Ramazan Savas Aygun and Aidong Zhang. " Management of Backward-Skip Interactions Using Synchronization Rules ", The 6th World Conference on Integrated Design & Process Technology, Pasadena, California, June 2002	SDPS
9	Ramazan Savas Aygun and Aidong Zhang. "Extracting Coarse Boundary Features for Video Processing", 2002 IEEE International Conference on Multimedia and Expo, Lausanne, Switzerland, August, 2002, Volume 2, pp. 65-68	IEEE
10	Ramazan Savas Aygun and Aidong Zhang. "Reducing Blurring-Effect in High Resolution Mosaic Generation", 2002 IEEE International Conference on Multimedia and Expo, Lausanne, Switzerland, August, 2002, Volume 2, pp. 537-540	IEEE
11	Ramazan Savas Aygun and Aidong Zhang. "Global Motion Estimation from Semi- Dynamic Video using Motion Sensors", 2002 IEEE International Conference on Image Processing, Rochester, New York, September, 2002, Volume 2, pp. 273-276	IEEE
12	Ramazan Savas Aygun and Aidong Zhang. "Sprite Pyramid for Videos and Images Having Finite-Depth Scenes", 2004 IEEE Conference on Multimedia and Expo, Taipei, Taiwan, June, 2004.	IEEE
13	Ramazan Savas Aygun and Aidong Zhang "Integrating Virtual Camera Controls into Digital Video", 2004 IEEE Conference on Multimedia and Expo, Taipei, Taiwan, June, 2004	IEEE
14	Yi Ma and Ramazan Savas Aygun. Peer-to-Peer Multimedia Digital Library, 2005 IEEE 37th Southeastern Symposium on System Theory. March, 2005, pp. 130-134.	IEEE
15	Yi Ma and Ramazan Savas Aygun. "The Methodology of Mesh-Cast Streaming in P2P Networks," 2005 IEEE Int. Workshop on Multimedia Information Processing and Retrieval (MIPR) in the Proceedings 7th IEEE International Symposium on Multimedia, December, 2005, pp. 611-615.	IEEE
16	Khalid Darabkh and Ramazan Savas Aygun. "Performance Evaluation of Sequential Decoding System for UDP-Based Systems for Wireless Multimedia Networks" 2006 International Conference on Wireless Networks, Las Vegas, June 26-29, 2006.	Worldcomp
17	Khalid Darabkh and Ramazan Savas Aygun. "Quality of Service Evaluation of Convolutional Decoding Using Fano Algorithms for TCP/IP-Based Systems in Packet Switching ATM Networks" 2006 International Conference on Internet Computing, Las Vegas, June 26-29, 2006.	Worldcomp
18	Khalid Darabkh and Ramazan Savas Aygun. "Quality of Service Performance Evaluation of Selective Message Discarding Policies for Multimedia Networking," 2006 International Conference on Internet Computing, Las Vegas, June 26-29, 2006.	Worldcomp
19	K. A. Darabkh and R. S. Aygun, "Simulation of Quality of Service of Congestion Control in Multimedia Networking Using Frame Discarding Policies" Proceedings of 2006 SCS	Conference CD-ROM

	International Conference on Modeling and Simulation - Methodology, Tools, Software Applications (M&S-MTSA'06), Calgary, Canada, , July 31- August 2, 2006	
20	K. A. Darabkh and R. S. Aygun, "Simulation of Performance Evaluation of Error Control for Packet-to-Packet Acknowledgment Based Systems in ATM Networks" Proceedings of 2006 SCS International Conference on Modeling and Simulation - Methodology, Tools, Software Applications (M&S-MTSA'06), Calgary, Canada, July 31- August 2, 2006	Conference CD-ROM
21	Preti Jain, Wadhwa P, Freije N, Aygun R, Podila G. A Robust Method for Identification and Comparative Genomics of G Proteins in Eukaryotes, PBR 2006 (Poster, non-refereed)	Poster
22	Preti Jain, Brar S, Freije N, Wadhwa P, Aygun R, Podila G. Prediction of G-Proteins using Support Vector Machines: A Machine Learning Algorithm, PBR 2006 (Poster, non-refereed)	Poster
23	Donna Carter and R. S. Aygun, "The Evaluation of State Explosion on Producer/Consumer Problem Using Promela/SPIN Model Checker" 10th World Conference on Integrated Design & Process Technology, Antalya, Turkey, 2007	SDPS
24	Ramazan Aygun, "Object Tracking and Solving Image Puzzles using CmuCam2+ Vision Sensor," University of Alabama in Huntsville Young Faculty Research Proceedings, 2007.	UAH
25	Vani Jain and Ramazan Aygun, "SMART: A Grammar-Based Semantic Video Modeling and Representation," Proceedings of IEEE SouthEastCon, Huntsville, AL, 2008	IEEE
26	Preti Jain, Ramazan Aygun, and Gopi Podila. Comparative genomic analysis of transcription factors in symbiotic fungus Laccaria bicolor and other pathogenic and nonpathogenic Basidiomycetes and Ascomycetes, Poster Proceedings of 4th Int. Symposium on Bioinformatics Research and Applications, 2008	
27	Mitesh Naik, Vani Jain, and Ramazan Aygun. "S3G: A Semantic Sequence State Graph for Indexing Spatio-Temporal Data - a Tennis Video Database Application," 2008 IEEE Int. Conference on Semantic Computing, pp. 66-73, Santa Clara, CA, August, 2008	IEEE
28	Yi Chen; Aygun, R.S.; , "Synthetic Video Generation with Camera Motion Patterns to Evaluate Sprite Generation," Advances in Multimedia, 2009. MMEDIA '09. First International Conference on , vol., no., pp.140-145, 20-25 July 2009	IARIA
29	Deshpande, A.A.; Aygun, R.S.; , "Motion Based Video Classification for SPRITE Generation," Database and Expert Systems Application, 2009. DEXA '09. 20th International Workshop on , vol., no., pp.231-235, Aug. 31 2009-Sept. 4 2009	Springer
30	Yi Chen; Aygun, R.S.; , "Synthetic Video Generation with Complex Camera Motion Patterns to Evaluate Sprite Generation," Multimedia, 2009. ISM '09. 11th IEEE International Symposium on , vol., no., pp.657-662, 14-16 Dec. 2009	IEEE
31	Yi Chen; Deshpande, A.A.; Aygun, R.S.; , "SpriteDB Tool A Web-Tool for Comparing Sprite Generation Results," Multimedia, 2009. ISM '09. 11th IEEE International Symposium on , vol., no., pp.438-439, 14-16 Dec. 2009	IEEE
32	Ramazan Aygun, Yi Chen, Vineetha Bettaiah, Thejaswi Raya, and Ayesha Bhatnagar, "Mosaic Generation: Challenges & Future Directions," NSF III 2010 Workshop, April 22-23, 2010 (abstract-poster only)	NSF
33	Vineetha Bettaiah and Ramazan Aygun, "A User Interface for Spatio-Temporal 'Eventually' Queries using Gamepad," Advances in Multimedia, 2011. MMEDIA '11.	IARIA

Third International Conference on , MMEDIA 2012, pp. 38-43, Budapest, Hungary, 17	
April 2011	
Yi Chen, Ramazan Savas Aygün: Improving Global Motion Estimation Using Texture Masks. ISM 2011: 583-588	IEEE
M. Sigdel, S. Begum, M. Pusey, and R. Aygun. "Real-Time Protein Image Acquisition and Classification System," 14th International Conf. on the Crystallization of Biological Macromolecules, Huntsville, AL, September 23-28, 2012 (abstract, oral presentation)	IEEE
Begum, S.; Aygun, R.S., "Analyzing the Performance of Hierarchical Binary Classifiers for Multi-class Classification Problem Using Biological Data," Machine Learning and Applications (ICMLA), 2012 11th International Conference on , vol.2, no., pp.145,150, 12-15 Dec. 2012	IEEE
S. Dinc and R. Aygun. "Evaluation of Hyperspectral Image Classification Using Random Forest and Fukunaga-Koontz Transform." MLDM 2013: 234-245	Springer
M. Sigdel and R. Aygun. "Pacc - A Discriminative and Accuracy Correlated Measure for Assessment of Classification Results. MLDM 2013: 281-295	Springer
S. Dinc, F. Fahimi, and R. Aygun "Vision-based trajectory tracking approach for mobile platforms in 3D world using 2D image space," Proceedings of the ASME 2013 International Mechanical Engineering Congress and Exposition, IMECE2013-64969, November 15-21, 2013	IEEE
R. Caywood, J. Edwards, and R. Aygun. "Object Mosaicking: Reconstruction of Moving Objects Captured Through a Limited View," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014	IEEE
I. Dinc, M. Sigdel, S. Dinc, MS Sigdel, M. Pusey, R. Aygun. "Evaluation of Normalization and PCA on the Performance of Classifiers for Protein Crystallization Images," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014	IEEE
MS Sigdel, M. Sigdel, S. Dinc, I. Dinc, M. Pusey, R. Aygun. "Autofocusing for Microscopic Images using Harris Corner Response Measure," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014	IEEE
S. Dinc, M. Sigdel, I. Dinc, MS. Sigdel, F. Fahimi, R. Aygun. "Depth-Color Image Registration for 3D Surface Texture Construction using Kinect Camera System," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014	IEEE
M. Sigdel, I. Dinc, S. Dinc, MS Sigdel, M. Pusey, R. Aygun. "Evaluation of Semisupervised Learning for Classification of Protein Crystallization Imagery," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014	IEEE
Madhav Sigdel, Madhu S. Sigdel, Imren Dinc, Semih Dinc, Marc L. Pusey, Ramazan S. Aygun, "Classification of Protein Crystallization Trial Images Using Geometric Features", IPCV 2014, July 2014.	Worldcomp
Imren Dinc, Semih Dinc, Madhav Sigdel, Madhu S. Sigdel, Marc L. Pusey, Ramazan S. Aygun, "DT-Binarize: A Hybrid Binarization Method Using Decision Tree for Protein Crystallization Images", IPCV 2014, July 2014.	IEEE
Akkaya, K., Guvenc, I., Aygun, R. S., Pala, N., Kadri, A. (in press). IoT-based Occupancy Monitoring Techniques for Energy-Efficient Smart Buildings. IEEE WCNC 2015 - Workshop - E2IoT.	IEEE
	Yi Chen, Ramazan Savas Aygün: Improving Global Motion Estimation Using Texture Masks. ISM 2011: 583-588  M. Sigdel, S. Begum, M. Pusey, and R. Aygun. "Real-Time Protein Image Acquisition and Classification System," 14th International Conf. on the Crystallization of Biological Macromolecules, Huntsville, AL, September 23-28, 2012 (abstract, oral presentation)  Begum, S.; Aygun, R.S., "Analyzing the Performance of Hierarchical Binary Classifiers for Multi-class Classification Problem Using Biological Data," Machine Learning and Applications (ICMLA), 2012 11th International Conference on , vol.2, no., pp.145,150, 12-15 Dec. 2012  S. Dinc and R. Aygun. "Evaluation of Hyperspectral Image Classification Using Random Forest and Fukunaga-Koontz Transform." MLDM 2013: 234-245  M. Sigdel and R. Aygun. "Pacc - A Discriminative and Accuracy Correlated Measure for Assessment of Classification Results. MLDM 2013: 281-295  S. Dinc, F. Fahimi, and R. Aygun "Vision-based trajectory tracking approach for mobile platforms in 3D world using 2D image space," Proceedings of the ASME 2013 International Mechanical Engineering Congress and Exposition, IMECE2013-64969, November 15-21, 2013  R. Caywood, J. Edwards, and R. Aygun. "Object Mosaicking: Reconstruction of Moving Objects Captured Through a Limited View," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014  I. Dinc, M. Sigdel, S. Dinc, MS Sigdel, M. Pusey, R. Aygun. "Evaluation of Normalization and PCA on the Performance of Classifiers for Protein Crystallization Images," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014  M. Sigdel, M. Sigdel, S. Dinc, M. Sigdel, F. Fahimi, R. Aygun. "Bepth-Color Image Registration for 3D Surface Texture Construction using Kinect Camera System," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014  M. Sigdel, I. Dinc, S. Dinc, MS Sigdel, M. Pusey, R. Aygun. "Evaluation of Semi-supervised Learning for Classification of Protein Crystallization Imagery," IEEE SoutheastCon 2014, Lexington, KY, March 13-16, 2014  M. Sigdel, I. Dinc, S

48	Imren Dinc, Marc L. Pusey, Ramazan S. Aygun, "Protein Crystallization Screening using Associative Experimental Design", ISBRA 2015, Bioinformatics Research and Applications, pp. 84-95.	Springer
49	Dinc, S., Fahimi, F., Aygun, R.S., S. Dinc, R. S. Aygun and F. Fahimi, "GPU Based Robust Image Registration for Composite Translational, Rotational and Scale Transformations," 2015 IEEE International Symposium on Multimedia (ISM), Miami, FL, 2015, pp. 339-342. doi: 10.1109/ISM.2015.51 (short paper)	IEEE
50	Dinc, I., Acharya, S., Juttu, M. K., Pusey, M., Aygun, R. S., Frontiers in Structural Biology of Membrane Protein & Pittsburgh Diffraction Conference, "Associative Experimental Design for Protein Crystallization Screening," Huntsville, AL. (March 2016). (Poster)	Online
51	Sigdel, M., Sigdel, M., Dinc, S., Dinc, I., Acharya, S., Juttu, M. K., Pusey, M., Aygun, R. S., Frontiers in Structural Biology of Membrane Protein & Pittsburgh Diffraction Conference, "Focal Stacking of Trace Fluorescence Labeled Protein Crystallization Images using FocusALL," Huntsville, AL. (March 2016). (Poster)	Online
52	Sigdel, M., Acharya, S., Juttu, M. K., Pusey, M., Aygun, R. S., Frontiers in Structural Biology of Membrane Protein & Pittsburgh Diffraction Conference, "Protein Crystal Growth on Time-Series Images of Crystallization Trials," Huntsville, AL. (March 2016). (Poster)	Online
53	Aygun, R. S., Frontiers in Structural Biology of Membrane Protein & Pittsburgh Diffraction Conference, "Real-Time Scoring of Protein Crystallization Trial Images," Huntsville, AL. (March 2016). (Talk)	Online
54	Dinc, I., Dinc, S., Sigdel, M., Sigdel, M., Pusey, M., Aygun, R. S., Frontiers in Structural Biology of Membrane Protein & Pittsburgh Diffraction Conference, "Segmentation of Protein Crystal Regions using Supervised Thresholding for Trace Fluorescence Labeled Protein Crystallization Trial Images," Huntsville, AL. (March 2016). (Poster)	Online
55	Dinc, I., Pusey, M., Aygun, R. S., Frontiers in Structural Biology of Membrane Protein & Pittsburgh Diffraction Conference, "Visual-X2: Scoring and Symbolic Visualization Tool for Analysis of Protein Crystallization Trial Images," Huntsville, AL. (March 2016). (Poster)	Online
56	Dinc, S., Fahimi, F., Aygun, R. S., Alabama EPSCoR Meeting, "Vision-based Trajectory Tracking for Mobile Robots Using Mirage Pose Estimation Method." (February 2016). (Poster)	

#### OTHER PUBLICATIONS

- 1. Ramazan Savas Aygun and Adnan Yazici. "Modeling and Management of Fuzzy Information in Multimedia Database Applications", Dept. of Computer Science and Engineering, SUNY/Buffalo, Technical Report 2002-16
- 2. Ramazan Savas Aygun and Aidong Zhang. "Rule-based Flexible Synchronization Modeling with Model Checking", Dept. of Computer Science and Engineering, SUNY/Buffalo, Technical Report 2002-15
- 3. Aygun, R. S. (2016). The World as a Visual Puzzle. Huntsville, Alabama: AL.com

#### **EXHIBITIONS**

Presentation to UAH-COS conference at College of Science.

Presentation to College of Science Students on sprite generation.

Poster and a video presentation at NSF III 2010 Workshop on mosaic generation.

#### INVITED COLLOQUIA, SEMINARS AND PRESENTATIONS

Sprite Generation and Future Directions (2 presentations), Alabama A&M University, Fall 2009

Images & Videos, Alabama A&M University, Spring 2012

Unsupervised Speaker Identification for TV News, Zirve University, Summer 2014

### TEACHING ACTIVITIES: SUMMARY LIST OF COURSES TAUGHT, THESES ADVISED

#### **COURSES TAUGHT**

CS 143: Intro Tech Multimedia & Gaming

CS 487: Database Systems,

CS 687: Database Systems,

CS 695: ST in CS (Multimedia Data Mining),

CS 695: ST in CS (Email Database Clustering),

CS 543: Introduction to Multimedia Systems,

CS 214: Discrete Structures,

CS 317: Design and Analysis of Algorithms,

CS 695: ST in CS(Multimedia Synchronization),

CS 695: ST in CS(Bioinformatics),

CS 696: ST on Data Mining,

CS 496: ST on Data Mining (with CS696),

CS 670: Computer Networks,

CS 641: Data Mining,

CS 643 Multimedia Systems,

CS 695: ST in CS (Information Retrieval, Processing, and Analysis),

CS 795: Independent Study,

CS 796: Adv. Multimedia systems,

CS 796: Feature Extraction and Applications

CS 795: ST: Thresolding Techniques for Protein Crystal Images

CS 796: ST: Mining Protein Crystallization Screen Data

CS596: ST: Visualization for Protein Crystallization

CS696: ST: Big Data Analytics

#### THESES ADVISED

#### **MASTER THESES**

- (Master) Tarun Yadav, "Content-Based Retrieval Based on User Browsing Feedback in Video Databases", Spring 2006
- 2. (Master) Rohan Zanje, "A Spatio-Temporal Collocation Approach to Multi-Sensor Satellite Data Fusion", Summer 2006
- 3. (Master) Donna Whitman, "Analyzing the Complexity of Proctypes and Do Loops for Promela/SPIN", Fall 2006
- 4. (Master) V. Jain, "G-SMART: A Grammar Based Semantic Modeling and Retrieval Tool for Video Database Applications", Summer 2008
- 5. (Master) M. Naik, "Spatio-Temporal Querying Using a Semantic Sequence State Graph", Fall 2008
- (Master) H. Kandadi, "SEAL: A Divide and Conquer Approach for Sequence Alignment", Summer 2009
- 7. (Master) A. Deshpande, "Video Classification for Sprite Generation," Fall 2009
- 8. (Master) T. Raya, "Automatic Feature Extraction from Tennis Videos for Content Based Retrieval", Spring 2011
- 9. (Master) V. Bettaiah, "Spatio-Temporal Query and Retrieval System Using Gamepad", Spring 2011
- 10. (Master) D. Woo, "Unsupervised Speaker Identification for TV News," Spring 2014
- 11. (Master) Madhu Sigdel, "Focal Stacking of Microscopic Images using Modified Harris Corner Response Measure," Fall 2014
- 12. (Master) S. Begum, "Greedy Hierarchical Binary Classifiers for Multi-class Classification of Biological Data," Summer 2013

#### **DISSERTATIONS**

- 13. (PhD) Khalid Darabkh, "Improving TCP and UDP Performance over Wireless Networks Using Quality of Delivery (QoD) Aware Wireless Systems"
- 14. (PhD) (as Co-advisor) P. Jain, "Gene Prediction and Comparative Genomics of Symbiotic Fungus Laccaria Bicolor", Spring 2009
- 15. (PhD) Y. Chen, "Sprite Generation using Sprite Fusion," Fall 2011
- 16. (PhD) M Sigdel, "A Framework for Real-Time Analysis of Protein Crystallization Images," Summer 2015

# SERVICE ACTIVITIES

#### HIGHLIGHTS

2009-Present Editorial Review Board Member International Journal of Multimedia Data Engineering

and Management (IJMDEM)

2011 Workshop Organizer IEEE Int. Workshop on Video Panorama

2012 Program Co-Chair IEEE International Symposium on Multimedia

2013 Guest Editor International Journal of Sematic Computing

#### SERVICE TO THE DEPARTMENT

Committee/Service	Term	Comment
Lecturer Reappointment Committee	2003-2004	
Database systems course coordinator	2004- Present	
Lecturer Reappointment Committee	2004-2005	
Computer Science Department Web Page	2004-2005	Worked with another faculty member and a graduate student on the development of the department's old web page.
Preliminary Examination Committee	Fall 2004	Served with two faculty members. We have provided new guidelines for preliminary examinations in computer science department.
Undergraduate Elective Committee	2005-2006	
Summer Internship Committee	2005-2006	Served with another faculty member and have submitted a course for students to apply their theoretical skills in real life.
Prelim Exam	Fall 2007	The coordinator of Data Structures and Programming Principles component of Ph.D. Preliminary Exam
Computer Science Brochure Preparation Committee	2007-2009	Served with two other faculty members
GTA Enhancement Committee	2007-2008	Participated in writing proposal with two other faculty members for attracting PhD students to our program.
Discrete Structures & Algorithms Improvement Committee	2008-2009	Served with two other faculty members

Computer Science Department Brochure	2008-2010	Prepared a brochure for graduate program of my department.
Re-Appointment Committee	2008-2009	For a tenure-track faculty
Gaming for Computer Science	2009-2010	Worked on a proposal for introducing gaming content to computer science program with two other faculty members.
Re-Appointment Committee	2009-2010	For a tenure-track faculty
Faculty Promotion Committee	2009-2010	Served on the promotion committees for a faculty member in 2009-2010 academic year.
Prelim Exam	Spring 2010	Prepared Data Structures & Programming Principles component of the preliminary exams.
Comprehensive Exam Coordinator	Spring 2010	
ABET	2009-2010	Updated the documents for courses CS214 and CS487 for ABET accreditation. I also accepted interview with the ABET committee.
Student Guidance	2009-2010	Accepted to help students who work on Apollo Project simulator.
Data Science Committee	2010-2013	Worked on proposing new courses on Fundamentals of Data and Information Science and Information retrieval in 2010-2011 academic year.
Re-Appointment Committee	2010-2011	For a tenure-track faculty.
ABET	2010-2011	Prepared the ABET report for three courses academic year: CS445, CS470, and CS487.
Prelim Exam	Fall 2010	Prepared Data Structures & Programming Principles component of the preliminary exams.
Curriculum Analysis	2011-2012	Prepared a detailed list of topics that I cover in my graduate courses to see whether there is any overlap with other courses and to see how to add new content.
Re-Appointment Committee	2011-2012	For a tenure-track faculty.
Prelim Exam	Fall 2012	Prepared Data Structures & Programming Principles component of the preliminary exams.
Entertainment Computing Committee	2012-2015	Worked with four other faculty members.
Faculty Search Committee	2012-2013	
MSSE Advisor	2012-2015	Serve as one of the advisors to the MSSE program.
Re-appointment Committee Chair	2012-2013	For a tenure-track faculty.
Prelim-Exam	Fall 2012	Prepared Data Structures & Programming Principles component of the preliminary exams.

Cybersecurity Lab Committee	2013-2015	Served on the committee to write a proposal to set up a cybersecurity lab and then continue to serve on the committee.
Faculty Search Committee	2013-2014	Served on the Faculty Search committee this academic year in 2013-2014 academic year.
Re-appointment Committee	2013-2014	For a tenure-track faculty.
Prelim Exam	Spring 2014	Prepared Data Structures & Programming Principles component of the preliminary exams.
ABET Committees	2013-2014	Served on two committees: Theoretical and mathematical Foundations and Electives.
Faculty Search Committee	2014-2015	
Comprehensive Exam	2014-2015	Prepared questions for Database Systems component of the comprehensive exam.
Re-Appointment Committee Chair	2014-2015	For a tenure-track faculty.
ABET	2014-2015	Continue to work on review of courses and preparation of documents for ABET.
Comprehensive Exam	2015-2016	Prepared questions for Database Systems component of the comprehensive exam.

### SERVICE TO THE COLLEGE

Committee/Service	Term	Comment
UAH-COS Student Conference	November 2006	Presented the overview of research in Computer Science department
Presentation to COS Students	Fall 2006	Presentation about my research (sprite coding and aspect ratio conversion)
Lecture Demonstration Contest	March 2006	Represented computer science department in lecture demonstration contest

### SERVICE TO THE UNIVERSITY

Organization	Role	Term	Comment
National Junior Science and Humanities Symposium	Career Roundtables Presenter	May 3, 2007	Gave a presentation
Faculty Senate	Undergraduate Curriculum Committee	2006-2008	
Graduate School	Observer	2008-2009	Served as an observer on a number thesis defenses. This was master thesis defense in atmospheric science department.
Faculty Senate	Undergraduate Curriculum Committee	2011-2012	
Faculty Senate	Undergraduate Scholastic Affairs	2011-2012	
UAH Strategic Plan Proposals	Contributor	2012-2013	Supported the Biotechnology proposal for strategic plan proposals at UAH.
UAH Strategic Plan Proposals	Contributor	2012-2013	Supported the Space Sciences proposal for strategic plan proposals at UAH.
LEAD Program	Participant	2014-2015	Leadership Enhancement and Administrative Development (LEAD) Program

#### SERVICE TO THE PROFESSIONAL COMMUNITY

Role	Journal	Comment
Editorial Review Board	International Journal of Multimedia Data Engineering and Management (www.igi-global.com/ijmdem)	Since 2008-2009 academic year
Guest Editor for a Special Issue	International Journal of Sematic Computing	Ramazan Savas Aygün, Robert Mertens, Atsuo Yoshitaka: Guest Editors' Introduction. Int. J. Semantic Computing 7(1): 1-4 (2013)

#### SERVING ON PROGRAM/ORGANIZING COMMITTEES OF CONFERENCES

- 1. The 15<sup>th</sup> International Conference on Database and Expert Systems Applications (DEXA 2004), Zaragosa, Spain, August 30 September 3, 2004
- 2. The 16<sup>th</sup> International Conference on Database and Expert Systems Applications (DEXA 2005), Copenhagen, Denmark, August 22 26, 2005
- 3. The 6<sup>th</sup> International Workshop on Multimedia Data Mining (MDM/KDD2005), Chicago, IL, August 21, 2005
- 4. The 11<sup>th</sup> International Workshop on Multimedia Information Systems, Sorrento, Italy, September 19-21, 2005
- 5. The 7<sup>th</sup> ACM SIGMM International Workshop on Multimedia Information Retrieval (MIR 2005), November 10-11, Singapore
- 6. The 1<sup>st</sup> IEEE International Workshop on Multimedia Information Processing and Retrieval (IEEE-MIPR 2005), December 12-14, 2005
- 7. The 44<sup>th</sup> ACM Southeast Conference (ACMSE 2006), March 10-12, Melbourne, Florida
- 8. IEEE International Workshop on Multimedia Technology and Ubiquitous Computing, 5-7 June, 2006, Taichung, Taiwan
- 9. The 17<sup>th</sup> International Conference on Database and Expert Systems Applications (DEXA 2006), Krakow, Poland, September 4 8, 2006
- 10. 2006 IEEE International Conference on Multimedia and Expo, Toronto, Canada, July 9-12, 2006
- 11. 2<sup>nd</sup> International Conference on Automated Production of Cross Media Content for Multi-Channel Distribution (AxMedis 2006), Leeds, December 13-15, 2006

- 12. ACM Multimedia 2006, October 22-24, Santa Barbara, California
- 13. International Symposium on Multimedia 2006, December 11-13, San Diego, California (Demonstration Co- Chair)
- 14. 2007 IEEE International Conference on Multimedia and Expo, Beijing, China, July 2-5, 2007
- 15. The 18<sup>th</sup> International Conference on Database and Expert Systems Applications (DEXA 2007), Regensburg, Germany, September 3 7, 2007
- 16. 1<sup>st</sup> International Workshop on Multimedia Data Mining and Management (MDM 2007) September 3 7, 2007
- 17. 1<sup>st</sup> IEEE Semantic Computing Conference, September 17-19, 2007, Irvine, CA, USA (Special Sessions Co-Chair)
- 18. International Symposium on Multimedia (ISM) 2007, Taichung, Taiwan, R.O.C., December 10-12, 2007
- 19. The 19<sup>th</sup> International Conference on Database and Expert Systems Applications (DEXA 2008), Politecnico di Torino Turin, Italy, 1-5 September 2008
- 20. 2<sup>nd</sup> Int. Workshop on Multimedia Data Mining and Management, Politecnico di Torino Turin, Italy, 1-5 September 2008
- 21. 2<sup>nd</sup> IEEE Semantic Computing Conference, August 4th-7th, 2008, Santa Clara, CA, USA (Systems & Applications Technical Area Co-Chair)
- 22. 10<sup>th</sup> International Conference on Enterprise Information Systems (ICEIS 2008), 12-16 June 2008, Barcelona, Spain
- 23. IEEE International Symposium on Multimedia, Berkeley, CA, December 15-17, 2008 (Demonstration Co-Chair)
- 24. The 20<sup>th</sup> International Conference on Database and Expert Systems Applications (DEXA 2009), Linz, Austria, 31 August-4 September 2009
- 25. 3<sup>rd</sup> Int. Workshop on Multimedia Data Mining and Management, Linz, Austria, 31 August-4 September 2009
- 26. 3rd IEEE Semantic Computing Conference, September 14-16, 2008, Berkeley, CA, USA (Demo Co-Chair)
- 27. IEEE International Symposium on Multimedia, San Diego, CA, December 14-16, 2009 (Publicity Co-Chair)
- 28. The 21<sup>st</sup> International Conference on Database and Expert Systems Applications (DEXA 2010), Bilbao, Spain, August 30 September 3, 2010
- 29. International Conferences on Advances in Multimedia (MMEDIA), Athens, Greece, June 13-19, 2010
- 30. 6<sup>th</sup> International Symposium on Visual Computing (ISVC 2010), Special Track on Low-Level Color Image Processing, Las Vegas, NV, November 29-December 1, 2010

- 31. IEEE International Symposium on Multimedia, Dana Point, CA, December 5-7, 2011 (Demonstration Co-Chair)
- 32. International Conference on Signal Processing and Multimedia Applications (SIGMAP), Seville, Spain, July 18-21, 2011
- 33. The 3<sup>rd</sup> International Conferences on Advances in Multimedia (MMEDIA), Budapest, Hungary, April 17-22, 2011
- 34. 4<sup>th</sup> IEEE International Conference on Semantic Computing, Pittsburgh, PA, September 22-24, 2011 (Advisory Committee)
- 35. IEEE International Workshop on Video Panorama (IWVP), Dana Point, CA, December 5-7, 2011 (Workshop Organizer)
- 36. 38th International Conference on Very Large Databases (VLDB 2012), August 27-31, 2012, Istanbul, Turkey (Publicity Chair)
- 37. The Fourth International Conferences on Advances in Multimedia (MMEDIA 2012) April 29 May 4, 2012 Chamonix / Mont Blanc, France
- 38. IEEE International Symposium on Multimedia, Irvine, CA, December 10-12, 2012 (Program Co-Chair)
- 39. IEEE International Symposium on Multimedia, Anaheim, CA, December 9-11, 2013 (Demo Co-Chair)
- 40. IEEE International Conference on Semantic Computing, Irvine, CA, September 16-18, 2013
- 41. The 10<sup>th</sup> ACS/IEEE International Conference on Computer systems and Applications (AICCSA 2013) May 27-30, Fes/Ifrane, Morocco
- 42. The 10<sup>th</sup> International Conference on Signal Processing and Multimedia Applications (SIGMAP 2013), Reykjavik, Iceland, July 29-31, 2013
- 43. The 15<sup>th</sup> International Conference on Enterprise Information Systems (ICEIS 2013), Angers, France, July 4-7, 2013
- 44. The Fifth International Conferences on Advances in Multimedia (MMEDIA 2013) April 21–26, 2013 Venice, Italy
- 45. IEEE International Symposium on Multimedia, Taichung, Taiwan, December 10-12, 2014 (Demo Co-Chair)
- 46. IEEE BigMM The First International Conference on Multimedia big Data, Beijing, China, April 20-22, 2015 (Demo/Poster Co-chair)
- 47. IEEE International Symposium on Multimedia, Miami, December 14-16, 2015 (Demo Co-chair)
- 48. IEEE International Conference on Semantic Computing, Laguna Hills, CA, February 3-5, 2015 (Workshop and Special Sessions Co-chair)
- 49. IEEE International Symposium on Multimedia, San Jose, December, 11-13, 2016. (Demo Co-chair)

50. The 19<sup>th</sup> International Conference on Enterprise Information Systems (ICEIS 2013), Porto, Portugal, April 26-29, 2017

### REVIEWER SERVICE

Reviewer Service	Organization	Comment
Journals	IEEE Transactions on Knowledge and Data Engineering	
	2. IEEE Transactions on Multimedia,	
	3. ACM Transactions on Multimedia Computing, Communications, and Applications	
	4. ACM Transactions on Database Systems,	
	5. IEEE Journal on Selected Areas in Communications	
	6. Computer Communications	
	7. IEEE Multimedia,	
	8. IEEE Signal Processing Magazine,	
	9. International Journal of Multimedia Tools and Applications,	
	10. ACM Multimedia Systems Journal,	
	11. Journal of Multimedia,	
	12. Knowledge and Information Systems: An International Journal,	
	13. IEE Journal: IEE Proc. Software, and	
	14. International Journal of Computers and Applications.	
	15. The Computer Journal	
	16. Journal of Visual Languages and Computing	
	17. Earth Science Informatics journal	
<b>Funding Agencies</b>	NSF	2007
Conferences	(2004) ACM Software Engineering (2004), (2008) 33 <sup>rd</sup> IEEE Conference for Local Computer Networks conferences (2008)	
Textbook	Database Systems ("Kifer: Database Systems)	2004-2005 academic year
	Mining Multimedia Documents (CRC Press: Book proposal)	2016
External Reviewer for	(2011) I served as external reviewer for tenure and promotion of a faculty member at another university.	
Tenure/Promotion	(2014) External Reviewer for Promotion to Professor at another university.	

(2015) External Reviewer for Promotion to Professor at	
another university.	

#### **SEMINARS**

- Two presentations titled "Sprite Generation and Future Directions," at Alabama A&M University in Fall 2009.
- Presentation at Alabama A&M University on March 1<sup>st</sup>, 2012 about image and video representations.
- Presentation to MAE students on October 19th, 2013.
- Presentation data mining and tracking for NSF-REU students in Summer 2014.
- Presentation on data mining and tracking for NSF-REU students in Summer 2015.
- Presentation on unsupervised speaker recognition from TV news at Zirve University, Turkey.

#### OTHER SERVICES

Category	Comment	
Mentorship	Mentor in 2015 ALSAMP Summer Internship Program.	
Professional and Non-Profit Organizations	<ul> <li>I served as a Member-At-Large officer at IEEE Computer Society, Huntsville, Alabama in 2006.</li> <li>Committee Member, The Association of Academic Advancement, Orlando, Florida. (September 14, 2014).</li> </ul>	
	<ul> <li>Committee Member, Young Scholars Meeting, The Association of Academic Advancement, Birmingham, Alabama. (March, 2015).</li> </ul>	
Outreach	K12 Workshop  I have organized a multimedia workshop with Butler High School that includes students from 9 <sup>th</sup> through 12 <sup>th</sup> grade. I and my student, Madhav Sigdel, visited the high school and gave presentations on multimedia tools and editing. (Summer 2012)	

# HONORS, AWARDS, AND SPECIAL RECOGNITIONS

2015	Senior Member	IEEE
2015	LEAD (Leadership Program)	UAH
2012	Certificate of Appreciation	IEEE ISM General Co-chair
2007	Certificate of Appreciation	IEEE Computer Society
2006	Certificate of Appreciation	IEEE Computer Society
2000-2003	Graduate Research Assistantship	State University of New York at Buffalo
1998-2000	Graduate Teaching Assistantship	State University of New York at Buffalo
1996-1998	Graduate Teaching Assistantship	Middle East Technical University, Turkey
1991-1996	Full Scholarship	Bilkent University, Turkey, 1991-1996
1990	Chemistry Award	The Scientific and Technical Research
		Council of Turkey