

Curriculum Vitae
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Personal Data:

Name: **Asadollah Shahbahrami**

Associate Prof. in Department of Computer Engineering
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Research Interests:

Advanced Computer Architectures, SIMD Programming, Reconfigurable Architectures, Multimedia Processors, Content-based Image and Video retrieval, Multimedia Instruction Set

Design, Multimedia Database Management, Embedded Systems Design, Digital Image and Video Processing, Data Mining, E-payment.

Education:

- *Ph.D degree in September 15 2008, Delft University of Technology Electrical Engineering Mathematics and Computer Science Computer Engineering Laboratory Thesis Title: "Avoiding Conversion and Rearrangement Overhead in SIMD Architectures"*
- *M.Sc degree in August 1996, Shiraz University, Shiraz, Iran Faculty of Engineering Field : Computer Engineering- Machine Intelligence Thesis Title: "Medical Images Segmentation using Neural Networks"*
- *B.Sc degree in May 1993, Iran University of Science & Technology Faculty of Computer Engineering Field : Computer Engineering- Hardware Thesis Title: "Design and Implementation of a General Data Acquisition Board"*

Teaching at University of Guilan (Rasht, Iran): *I teach the following courses in Bachelor in Computer Engineering and in Electrical Engineering.*

- *Fundamental of Multimedia Systems*
- *Data Structures*
- *Fundamental of MicroComputers*
- *Computer Architecture*
- *Digital Design*
- *Technical and Scientific Writing and Speech*

I also teach the following courses in Master in Information Technology and Computer

- *Multimedia Data Compression*
- *E-Payment*
- *Advanced Computer Architecture*
- *Parallel Algorithms*
- *Distributed Systems*
- *Web-based Information Storage and Retrieval*

Teaching Assistant at TU Delft (Delft, The Netherlands):

- *September/2008 — January/2009: Teaching assistant for the subjects “Modern Computer Architecture” and “Embedded Computer Architecture” for the first year of the M.Sc. in Computer Engineering of Delft University of Technology.*
- *March/2005 — July/2005 and March/2008 — July/2008: Teaching assistant for the subject “Computer Architectures - Special Topics” for the first year of the M.Sc. in Computer Engineering of Delft University of Technology.*
- *Mentor for 5 projects for undergraduate students.*

My MSc Students at TU Delft:

- *Anh Pham, “Optimization of Texture Features Extraction Algorithms” August 2010.*
- *Mitra Abbasfard “Digital Image Watermarking Robustness: A Comparative Study”, June 2009.*
- *Mashid Roumi, “Implementing Texture Feature Extraction Algorithms on FPGA”, August 2009.*

Membership:

- *Member of the Institute of Electrical and Electronics Engineers (IEEE), Association for Computing Machinery (ACM), the HiPEAC Network of Excellence. The Iranian Machine Vision and Image Processing (MVIP).*

Ph.D Internship Program:

Three months (Oct./Nov./Dec./2007) in the ARM Company in Cambridge in the UK. The project was related to vectorization of wireless protocols using the Ardbeg architecture.

HiPEAC Summer School

International Summer School on Advanced Computer Architecture and Compilation for Embedded Systems (ACACES). One week summer school in July/2008 (<http://www.hipeac.net/summerschool/acaces>).

Program Committee:

- *17th Reconfigurable Architectures Workshop (RAW2010) April 19-20, 2010, Atlanta, USA (<http://www.ece.lsu.edu/vaidy/raw/>)*
- *The International Conference on Digital Information and Communication Technology and its Applications that will be held in Dijon, France, on June 21-23, 2011. www.sdiwc.net/fr/index.php*
- *The International Conference on Informatics Engineering and Information Science that will be held in Kuala Lumpur, Malaysia, on Nov. 14-16, 2011. www.sdiwc.net/kl/index.php*
- *The First National Conference on Soft Computing and Information Technology (NCSCIT 2011), 3-4 March/2011, Islamic Azad University of Mahshar, www.ncscit.ir/2011/index.php Employment:*
- *Assistant Professor in Computer Engineering Department, Faculty Of Engineering, University of Guilan, Rasht, Iran, <http://guilan.ac.ir/en/>.*
- *From 1994 to 1996: Lecturer in Islamic Azad University branch of Shiraz and Estahban, Iran. I taught following courses there: Information Retrieval, Database Systems, System Analysis, C Programming, Assembly Language.*
- *From September/1996 to December/2003: Lecturer in Islamic Azad University branch of Lahijan, Iran. I taught following courses there: Information Retrieval, Database Systems, System Analysis, C Programming, Assembly Language, Computer Architecture, Microprocessor, Operation System, Computer Networks*
- *From September/1996 to December/2003: A member of faculty staff of Department of Electrical Engineering in the university of Guilan, Rasht, Iran. I taught following courses there: Operating System, Computer System Architecture, Logical Circuits, Microprocessor, Data Base system, Data Structure, C programming, and Computer Networks.*

I have also guided many B.Sc Projects.

- *From 1993 to 1998: As a programmer in research assistance office, Shiraz University. I have implemented many Data Base system using Visual foxpro/Basic and C for some Iran's Universities.*

Talk:

- *"SIMD Architectural Enhancements to Improve the Performance of the 2D Discrete Wavelet Transform" 12th Euromicro Conf. on Digital System Design (DSD), August, 2009, Patras, Greece.*
- *"Performance Improvement of Multimedia Kernels by Alleviating Overhead Instructions on SIMD Devices" Advanced Parallel Processing Technologies, August 2009. Rapperswil, Switzerland.*
- *"Optimization of Content-Based Image Retrieval Functions", 10th IEEE Int. Symp. on Multimedia, December 2008, Berkeley, California, the USA.*
- *"Avoiding Conversion and Rearrangement Overhead in SIMD Architectures" Ph.D. bDefense, September 15 2008, Delft, the Netherlands*
- *"Vision-Based Hand Gesture Recognition for Human Computer Interaction: A Review," IADIS Int. Conf. Interfaces and Human Computer Interaction, July 2008, Amsterdam, the Netherlands*
- *"FPGA Implementation of Parallel Histogram Computation," 2nd HiPEAC Workshop on Reconfigurable Computing, January 2008, Sweden.*

- *"Limitation of Special-Purpose Instructions for Similarity Measurements in Media SIMD Extensions"*, TU Delft, March 2007, The Netherlands.
- *"Limitation of Special-Purpose Instructions for Similarity Measurements in Media SIMD Extensions"* October 2006, Seoul, South Korea.
- *"Improving the Memory Behavior of Vertical Filtering in the Discrete Wavelet Transform"* May 2006, Ischia, Italy.
- *"Improving the Memory Behavior of Discrete Wavelet Transform"* March 2006, TU Delft, The Netherlands.
- *"Performance Comparison of SIMD Implementations of the Discrete Wavelet Transform"* July 2005, Samos, Greece.
- *"Image and Video Retrieval"* May 2005, TU Delft, The Netherlands.
- *"Avoiding Data Conversions in Embedded Media Processors"* March 2005, Santa Fe, New Mexico, USA.
- *"Avoiding Data Conversions in Embedded Media Processors"* March 2005, TU Delft, The Netherlands.
- *"A Comparison Between Processor Architectures for Multimedia Applications"* May 2004, TU Delft, The Netherlands.
- *"The Determination of Initial Condition in Constraint Satisfaction Neural Networks for Medical Images Segmentation"* February 2001 University of Isfahan, Iran.
- *"The Selection of Multiple Threshold Scheme for Image Segmentation Based on Co Occurrence Matrix"* March 2000, the University of Guilan, Rasht, Iran.
- *"Simulation of a Environment for Comparison of Different Page Replacement Algorithms in Structural Memory Hierarchy"* March 2001, the University of Guilan, Rasht, Iran.

Publication:

Ph.D Thesis:

- A. Shahbahrami, *"Avoiding Conversion and Rearrangement Overhead in SIMD Architectures"*, September, 2008 ISBN:978-90-807957-9-2

Journal:

- B. Yahid, M. B. Nobakht, A. **Shahbahrami**, "Trust in E-cheque in E-commerce", *New Marketing Research Journal, Special Issue*, 2014.
- A. Jafari, R. Hassanpour, A. **Shahbahrami**, S. Wong, "A Combined Spatial and Frequency Based Texture Model for Organ Segmentation in Computed Tomography Examinations", *Journal of Medical Imaging and Health Informatics, American Scientific Publishers, ISI IF= 0.642*
- E. Shamsinejad, A. **Shahbahrami**, A. R. Hedayati, A. Khademzadeh, H. Baniroostam, "Presentation Methods for Task migration in Cloud Computing by Combination of Yu Router and Postostost-Copy", *International Journal of Computer Science Issues*
- H. Mohamadi, A. **Shahbahrami**, J. Akbari "Image Retrieval Using the Combination of Text-Based and Content-Based Algorithms", *Journal of artificial intelligence and data mining, vol.1.no.1., pp:27-34, winter2013.*
- N. Amani, A. **Shahbahrami** and M. Nahvi, "A New Approach for Face Image Enhancement and Recognition", *International Journal of Advanced Science and Technology, Vol. 52, March pp:1-10, 2013.*
- B. Yahid, A. **Shahbahrami** and M. B. Nobakht, "Providing Security for E-Wallet using E-Cheque", *International Journal of Information Science and Management (IJISM) pp:85-96, April, 2013.*

- H. Mohamadi, A. **Shahbahrami** and J. Akbari" *Image Retrieval Using the Combination of Text-Based and Content-Based Algorithms*, *Journal of artificial intelligence and data mining*, Vol.1.No.1, pp:27-34,2013 .
- A. R. Akoushideh, A. **Shahbahrami** and B. M. Maybodi, "High Performance Implementation of Texture Features Extraction Algorithms using FPGA architecture", *Journal of real time image processing*, Vol.7, 2012.
- M. Salehpour and A. **Shahbahrami**, *Alleviating Dynamic Resource Allocation for Bag of Tasks Applications in Cloud Computing*, *International Journal of Grid and Distributed Computing*, Vol.5, No. 3, pp:95-110, Sept 2012.
- R. Asgari, A. A. Ramaki, E. Ebrahimi and A.**Shahbahrami**, "Multi Objective Design Space Exploaration for Grid ALU Processor", *International Journal of Embedded Systems and Applications (IJESA)*, Vol.2, No.3. Sept 2012 .
- M. Ghane and A. **Shahbahrami**, "Landscape Image Filtering via Aesthetic Inference", *IOSR Journal of Engineering (IOSRJEN)*, Vol.2, No.8, pp:33-38. Indexed: Research Gate, Google, DOAJ, Academic Resources, Aug 2012.
- H. Gorgani, H. Hassanpour and A. **Shahbahrami**, "Computing of the burnt forest regions area using digital image processing", *Journal of advances in computer research*, Vol.3, No. 4. Pp:47-54.
- M. Ayobi, M. Ayobi, and A. **Shahbahrami**, "Evaluation of Security Attacks on UMTS Authentication Mechanism", *International Journal of Network Security and Applications(IJNSA)*, Vol. 4. No. 4, pp:37 -52, Jul 2012.
- A. Attar, R. Moradi Rad and A. **Shahbahrami**, "A predictive algorithm for multimedia data compression", *Multimedia Systems*, Impact Factor:0.729, ISI, , Jul 2012.
- A. **Shahbahrami** "Algorithms and architectures for 2D discrete wavelet transform", *The Journal of Supercomputing*, Impact Factor: 0.578, ISI, 22 May 2012.
- M. Kiani Sarkaleh and A. **Shahbahrami** "Classification of ECG Arrhythmias Using Disceret Wavelet Transform and Neural Networks", *International Journal of Computer Science, Engineering and Applications (IJCSEA)* Vol.2, NO. 1, pp:1-13<http://airccse.org/journal/ijcsea/current2012.html>, February 2012.
- M. Ayobi, M. Ayobi, and A. **Shahbahrami**, *Evaluation of Security Attacks on Different Mobile Communication Systems*, *Canadian Journal on Network and Information Security*, 2012.
- M. Ayobi, M. Ayobi, and A. **Shahbahrami**, *Evaluation of Security Attacks on UMTS Authentication Mechanism*, *International Journal of Network Security & Its Applications IJNSA*, 2012.
- R. M. Rad, A. Attar and A. **Shahbahrami**, *A predictive algorithm for multimedia data compression* , *Multimedia Systems*, 2012.
- A. **Shahbahrami**, *Algorithms and Architectures for 2D Discrete Wavelet Transform*, *The Journal of Supercomputing*, 2012.
- H. Sharifi and A. **Shahbahrami**, *An Evaluation of License Plate Recognition Algorithms*, *International Journal of Digital Information and Wireless Communications*, 2012.
- M. Kiani and A. **Shahbahrami**, *Classification of ECG Arrhythmias Using Discrete Wavelet Transform and Neural Networks*; *International Journal of Computer Science, Engineering and Applications*, 2012.

- M. Ahmadi, **A. Shahbahrami** and S. Wong, *Collaboration of reconfigurable processors in grid computing: Theory and application. Future Generation Computer Systems* Vol.27, Issue 6, Pages 850-859 ISI. Impact Factor: 2.37, Jun 2011.
http://www.elsevier.com/wps/find/journaldescription.cws_home/505611/description#
- **A. Shahbahrami**, Ramin Bahrampour, Mobin Sabbaghi Rostami and Mostafa Ayoubi Mobarhan "Evaluation of Huffman and Arithmetic Algorithms for Multimedia Compression Standards" *International Journal of Computer Science, Engineering and Applications (IJCSEA)*, Vol. 1, No. 4, pp:44-56, Aug 2011.
- **A. Shahbahrami**, T. Anh Pham and K. Bertels. *Parallel Implementation of Gray Level Co-occurrence Matrices and Haralick Texture Features on Cell Architecture. The Journal of Supercomputing* pp. 1-23. Impact Factor: 0.545
<http://www.springer.com/computer/swe/journal/11227>
<http://www.citeulike.org/journal/springerlink-100302/page/2>, 2011.
- H. Sharifi and **A. Shahbahrami**, "An Evaluation of License Plate Recognition Algorithms", *The SDIWC International Journal of Digital Information and Wireless Communications*, Vol.1, No.1, pp:247-253, Nov. 2011.
- F. Tavakkoli, A. Andalib, **A. Shahbahrami** and R. Ebrahimi Atani "A Comparison of Lightweight Databases in Mobile Systems " *Journal of Computing* , Vol. 3, Issue 7, pp:147-152, July 2011 .
- **A. Shahbahrami**, R. Bahrampour, M. S. Rostami and M. A.i Mobarhan, *Evaluation of Huffman and Arithmetic Algorithms for Multimedia Compression Standards, International Journal of Computer Science, Engineering and Applications (IJSCEA)*, Vol. 1, No. 4, Aug 2011.
- A. Andalib, F. Tavakoli, **A. Shahbahrami**, and R. Ebrahimi, *A Comparison of Lightweight Databases in Mobile Systems, Journal of Computing* , 2011.
- **A. Shahbahrami**, A. Thun, and K. Betels, *Parallel implementation of Gray Level Co-occurrence Matrices and Haralick texture features on cell architecture, Journal of Supercomputing*, July 2011.
- R. Hassanpour and **A. Shahbahrami**, *Human Computer Interaction Using Vision-Based Hand Gesture Recognition, Journal of advances in Computer Research* No.2, pp.21-30. 2010.
- M. Ahmadi, **A. Shahbahrami** and S. Wong, "Collaboration of Reconfigurable Processors in Grid Computing for Multimedia Kernels" *Advances in Grid and Pervasive Computing (LNCS6104)* pp:5-14, Springer, May 2010.
- **A. Shahbahrami** and B.H.H. Juurlink, "Performance Improvement of Multimedia Kernels by Alleviating Overhead Instructions on SIMD Devices" *Advanced Parallel Processing Technologies (LNCS5737)*, pp: 389-407, Springer, Aug 2009.
- **A. Shahbahrami**, B.H.H. Juurlink and Stamatis Vassiliadis, "Implementing the 2DWavelet Transform on SIMD-Enhanced General-Purpose Processors", *IEEE Transactions on Multimedia*, Vol. 10, No. 1, pp: 43-51, Jan, 2008.
- **A. Shahbahrami**, B.H.H. Juurlink and Stamatis Vassiliadis, "Versatility of Extended Subwords and the Matrix Register File", *ACM Transactions on Architecture and Code Optimization*, Vol. 5, No. 1, Article No.: 5, 2008.
- R. Hassanpour, **A. Shahbahrami** and S. Wong "Adaptive Gaussian Mixture Model for Skin Color Segmentation", *International Journal of Computer and Information Science and Engineering*, Vol. 2, No. 2, 2008.

- **A. Shahbahrami**, B.H.H. Juurlink, D. Borodin and Stamatis Vassiliadis "Avoiding Conversion and Rearrangement Overhead in SIMD Architectures" *International Journal of Parallel Programming*, Vol. 34, No. 3, pp: 237-260, June, 2006.

Proceedings:

- A.Asafnejhad, **A.shahbahram**, *Signature Extraction and Recognition from Text Images Using Algorithm of Boundary Extension of Rectangle and Density Bounding Signature Area*".
- M.badi, **A.Shahbahrami**, *Provide a solution for the allocation of Customers authentication methods (Case study: multimedia contact center, Agriculture Bank of Iran ,the third conference on electronic banking and payment systems, Jan, 2014.*
- Sh.Mosamami, Z. Ziran, **A. Shahbahrami**, M.Morad, *E-Consumer Behavior Verification in Business to Consumer E-Commerce using Data Mining Technique "* *1st International Conference on New Directions in Business, Management, Finance and Economics* Sept, 2013.
- M. Peyk Herfeh, **A. Shahbahrami**, F. Parhizkar Miandehi, *Detecting Earthquake Damage levels Using Adaptive Boosting*, <http://mvip2013.znu.ac.ir/>,2013.
- S. Timarchi, P. Ghayor, **A. Shahbahrami**. *A Novel High-Speed Low-Power Binary Signed-Digit Adder*, *16th International symposium on Computer Architecture and Digital Systems CADs2012*.
- M. Ayobi, M. Ayobi, and **A. Shahbahrami** . *Different Security Attacks on UMTS*, *6th International Conference on e-Commerce in Developing Countries: with focus on e-Security*, May, Shiraz, Iran,2012.
- M. Ayobi, M. Ayobi, and **A. Shahbahrami**. *Security Vulnerabilities of the GSM, GPRS, and UMTS Systems*, *6th International Conference on e-Commerce in Developing Countries: with focus on e-Security*, May, Shiraz,2012.
- H. Sharifi, **A. Shahbahrami**, R. Hassanzadeh. *MPEG-7 for e-Commerce Applications*, *6th International Conference on e-Commerce in Developing Countries: with focus on e-Security*, May, Shiraz, Iran,2012.
- M. S. Hossini, **A. Shahbahrami**, M. Moradi. *Credit Scoring for Banks Based on Decision Tree and Neural Network Algorithms*, *6th International Conference on e-Commerce in Developing Countries: with focus on e-Security*, May, Shiraz, Iran,2012.
- B. Yahid, **A. Shahbahrami**, M. B. Nobakht. *MOBILE E-CHEQUE*, *6th International Conference on e-Commerce in Developing Countries: with focus on e-Security*, May, Shiraz, Iran, 2012.
- M. Salehpour, **A. Shahbahrami**. *Exploiting Parameters of SLA to Allocate Resources for Bag of Task Applications in Cloud Environment*, *Third International Conference on Contemporary Issues in Computer and Information Sciences*, pp:262-266 (CICIS)May 29- May 31, 2012.
- M. Shikholeslami, **A. Shahbahrami**, R. Hassanzadeh and N. Karimpour. *A Simple and Efficient Fusion Model based on the Majority Criteria for Human Skin Segmentation*, *Third International Conference on Contemporary Issues in Computer and Information Sciences*, pp:374-379 (CICIS) May 29- May 31, 2012 .
- **A. Shahbahrami**. M. Abbasfard and R. Hassanpour. *A Comparison of Transform-Domain Digital Image Watermarking Algorithms*, *Third International Conference on*

Contemporary Issues in Computer and Information Sciences, pp:329 (CICIS May 29-May 31, 2012) .

- M. Ayobi, **A. Shahbahrami**, S. Parva, M. Naghash and A. Khajekini. A License Plate Detection Algorithm using Edge Features, *International Conference on Soft Computing, Artificial Intelligence and Applications*, pp:413-421 ,2012.
- M. Mehri, R. Hassanzadeh and **A. Shahbahrami**. Application of Image Processing for Detection of Illicit Materials using X-ray Inspection Method, *Congress on Detection and Analysis of Illicit Materials, Anti-Narcotics Police*,12-13 Jan. 2012.
- L. Nejad Hashemi, B. Naser Sharif and **A. Shahbahrami**. Statistical Modeling in Wavelet domain for Bayesian Texture Classification and Retrieval, *International Conference on Computer and Knowledge Engineering*, Oct. 13-14, Ferdowsi University of Mashhad, Mashhad, Iran pp:310-315, 2011.
- M. Salepour and **A. Shahbahrami**. Alienable Services for Cloud Computing, *International Conference on Intelligent Distributed Computing*, Delft, The Netherlands, pp:195-200, Oct 7, 2011.
- S. Salehi, **A. Shahbahrami** and M. Mahdavi. Personalized Virtual University: Applying Personalization in Virtual University, *The 2nd International Conference on Artificial Intelligence, Management Science and Electronic Commerce (AIMSEC)* , Pp:6704-6706, April 27th 2011.
- Morteza Elmi Maryan, Maryam Habibi, Reza Ebrahimi Atani and **A. Shahbahrami**. Application of Barcode Tattoo in Security Systems. *5th International Computer and Instructional Technologies Symposium*, 23 Sept, 2011.
- L. Azari, P. Abolghasem and **A. Shahbahrami**. DICOM Technology in E-health System, *IADIS International Conference E-health 17*. Pp:256-258, July 2011.
- A. Attar, R. M. Rad, and **A. Shahbahrami**. EBIQA: An Edge Based Image Quality Assessment, *The 7th Iranian Conference on Machine Vision and Image, Processing*, , Iran University of Science and Technology (IUST), Tehran, Iran, <http://mvip2011.iust.ac.ir>, <http://mvip2011.ir>, November 16-17, 2011.
- **A. Shahbahrami**. Improving the Performance of 2D Discrete Wavelet Transform using Data-Level Parallelism. *The International Conference on High Performance Computing & Simulation (HPCS)*. Pp: 362-368, 2011.
- S. L. Nejadhashemi, B. Nasersharif, and **A. Shahbahrami**. Content-Based Image Retrieval in Wavelet Domain Using Feature Reduction. *International Conference on Contemporary Issues in Computer and Information Sciences (CICIS)*, Pp:255-259, May 31/2011.
- H. Sharifi and **A. Shahbahrami**. A Comparative Study on Different License Plate Recognition Algorithms. *The International Conference on Digital Information and Communication Technology and its Applications*, pp:686-691. France, June 2011 .
- S. Mehmandost, and **A. Shahbahrami**, A Comparison between Different Fingerprint Matching Techniques. *The International Conference on Digital Information and Communication Technology and its Applications*, pp:242-253, France, , June 2011.
- M. Faridi, and **A. Shahbahrami**. Electronic municipality as an alternative, complement, or development of traditional municipality. *International Conference on Computer Communication and Management (ICCCM)*. Sydney Australia. pp. 611-615, 2011.
- S. L. Nejadhashemi, B. Nasersharif, and **A. Shahbahrami**. Content-Based Image Retrieval in Wavelet Domain Using Feature Reduction. *International Conference on Contemporary Issues in Computer and Information Sciences (CICIS)*, Pp:255-259, May 31/2011.

- H. Sharifi and A. **Shahbahrami**. A Comparative Study on Different License Plate Recognition Algorithms. *The International Conference on Digital Information and Communication Technology and its Applications*. 90/3/31, pp:686-69., France, June 2011 .
- S. Mehmandost, and A. **Shahbahrami**, A Comparison between Different Fingerprint Matching Techniques. *The International Conference on Digital Information and Communication Technology and its Applications*, pp:242-253, France, June 2011 .
- M. Faridi, and A. **Shahbahrami**. Electronic municipality as an alternative, complement, or development of traditional municipality. *International Conference on Computer Communication and Management (ICCCM)*. Sydney Australia. pp. 611-615 , 2011.
- A. Jafari, M. Rezvan and A. **Shahbahrami**. A Comparison Between Arithmetic and Huffman Coding Algorithms , *The 6th Iranian Machine Vision and Image Processing Conference (MVIP)*, pp.248.254, 2010.
- A. **Shahbahrami** and F. Razavi. The Application of Parallel Processing in E-commerce Systems. *1st National Conference on Soft Computing and Information Technology Mahshar* pp. 265, 2010.
- A. R. Akoushideh and A. **Shahbahrami** Accelerating Texture Features Extraction Algorithms using FPGA Architecture. *IEEE International Conference on Reconfigurable Computing*. pp.232-237,2010.
- A. Attar, R. Moradi Rad, and A. **Shahbahrami** Effective Gradient-Based Algorithm for Predictive Image Compression. *3rd National Conference on Computer Engineering & Information Technology*. Hamehdan pp.285-291, 2010.
- A. Attar, R. Moradi Rad, and A. **Shahbahrami**. An Accurate Gradient-Based Predictive Algorithm for Image Compression. *The 8th International Conference on Advances in Mobile Computing & Multimedia (MoMM)*, pp.382-385,2010.
- A. Jafari, M. Rezvan and A. **Shahbahrami**. A Comparison Between Arithmetic and Huffman Coding Algorithms , *The 6th Iranian Machine Vision and Image Processing Conference (MVIP)*, pp.248.254, 2010.
- Z. Sadeghi and A. **Shahbahrami**," Improving the Speed of the Network Intrusion Detection"
- M. Fallahmeh, S. S. Shaabanzadeh, M. Shabanifar and A. **Shahbahrami**," Customer Relationship Management Based on Data Mining Techniques
- A. Attar, R. Moradi Rad and A. **Shahbahrami**. An Accurate Gradient-Based Predictive Algorithm for Image Compression. *The 8th International Conference on Advances in Mobile Computing & Multimedia (MoMM)* pp.382-385, 2010.
- A. Attar, R. Moradi Rad, and A. **Shahbahrami** Effective Gradient-Based Algorithm for Predictive Image Compression. *3rd National Conference on Computer Engineering & Information Technology*. Hamehdan.pp.285- 291 , 2010 .
- A. R. Akoushideh and A. **Shahbahrami** Accelerating Texture Features Extraction Algorithms using FPGA Architecture. *IEEE International Conference on Reconfigurable Computing*.pp.232-237, 2010.
- A. **Shahbahrami** and F. Razavi. The Application of Parallel Processing in E-commerce Systems. *1st National Conference on Soft Computing and Information Technology Mahshar*. pp. 265, 2010.
- A. **Shahbahrami**. Improving the Performance of 2D Discrete Wavelet Transform using Data-Level Parallelism. *The International Conference on High Performance Computing & Simulation (HPCS)*. Pp: 362-368, 2011.

- **A. Shahbahrami** and F. Razavi. *The Application of Parallel Processing in E-commerce Systems. 1st National Conference on Soft Computing and Information Technology Mahshar*, pp. 265-27, 2010.
- A. Akoushideh and **A. Shahbahrami**, *Accelerating Texture Features Extraction Algorithms using FPGA Architecture, International Conference on ReConFigurable Computing and FPGAs, December 13-15, Cancun, Mexico, 2010.*
- A. Attar, R. Moradi Rad and **A. Shahbahrami**, *An Accurate Gradient-Based Predictive Algorithm for Image Compression, The 8th International Conference on Advances in Mobile Computing & Multimedia (MoMM, in Paris, France,), 8 - 10 Nov 2010.*
- A Jafari, M. Rezvan, and **A. Shahbahrami**, *A Comparison Between Arithmetic and Huffman Coding Algorithms, The 6th Iranian Conference on Machine Vision and Image Processing (MVIP), Isfahan, Iran, Oct 2010.*
- M. Sahebi, A. Azizi Mazreah, **A. Shahbahrami**, and B. Bakhshi, *The Effect of Tmax in Energy Consumption in IEEE 802.16e, with Traffic Load, World Academy of Science, Engineering and Technology 65,pp.535-539, 2010.*
- R. Hassanpour, **A. Shahbahrami** and S. Wong, *Hand Segmentation by Fusing 2D and 3D Data, The 2nd International Conference on Computer modeling and simulation (iccms), January 2010.*
- F. Tavakkoli, **A. Shahbahrami** and A. Andalib, *“Comparison Between LightWeight Databases for Mobile Systems” Proc. 1st Iranian Student Conf. on Information Technology, University of Kordestan, Iran, July 2010.*
- R. Hassanpour, **A. Shahbahrami** and S. Wong, *“Hand Segmentation by Fusing 2D and 3D Data” Proc. 2nd Int. Conf. on Computer Modelling and Simulation, Jan 2010.*
- **A. Shahbahrami**, M. Ahmadi, S. Wong and K.L.M. Bertels, *“A New Approach to Implement Discrete Wavelet Transform using Collaboration of Reconfigurable Elements” Proc. Int. Conf. on DReConFigurable Computing and FPGAs, Cancun, Mexico, Dec 2009.*
- M. Fazlali, A. Zakerolhosseini, **A. Shahbahrami** and G. N. Gaydadjiev, *“High Speed Merged-datapath Design for Run-Time Reconfigurable Systems” Proc. Int. Conf. on Field-Programmable Technology (FPT09), Sydney, Australia, Dec 2009.*
- **A. Shahbahrami** and B.H.H. Juurlink, *“Optimization of Content-Based Image Retrieval Functions” Proc. 10th IEEE Int. Symp. on Multimedia (ISM2008) pp. 607-612, California, USA, Dec 2008.*
- **A. Shahbahrami** and B.H.H. Juurlink, *“A Comparison of Two SIMD Implementations of the 2D Discrete Wavelet Transform” Proc. 18th Annual Workshop on Circuits, Systems and Signal Processing (ProRISC2007), pp.169-177 , The Netherlands, Nov 2007.*
- **A. Shahbahrami**, D. Borodin and B.H.H. Juurlink, *“Comparison Between Color and Texture Features for Image Retrieval” Proc. 19th Annual Workshop on Circuits, Systems and Signal Processing (ProRISC2008), The Netherlands, Nov 2008.*
- J. Tao and **A. Shahbahrami**, *“Data Locality Optimization Based on Comprehensive Knowledge of the Cache Miss Reason: A Case Study with DWT”, Proc. 10th IEEE Int. Conf. on High Performance Computing and Communications, 25-27, pp:304-311, Sept. 2008.*
- **A. Shahbahrami** and B.H.H. Juurlink, *“SIMD Architectural Enhancements to Improve the Performance of the 2D Discrete Wavelet Transform” Proc. 12th Euromicro Conf. on Digital System Design (DSD), pp:497-504, Patras, Greece, Aug 27-29, 2009.*

- R. Hassanpour, **A. Shahbahrami** and S. Wong, "Adaptive Gaussian Mixture Model for Skin Color Segmentation", *Proc. World Academy of Science, Engineering and Technology*, Vol. 31, July 2008.
- Reza Hassanpour, Stephan Wong and **A. Shahbahrami**, "Vision-Based Hand Gesture Recognition for Human Computer Interaction: A Review", *Proc. IADIS Int. Conf. Interfaces and Human Computer Interaction*, July 2008.
- **A. Shahbahrami**, J. Young Hur, B.H.H. Juurlink and S. Vassiliadis "FPGA Implementation of Parallel Histogram Computation" *2nd HiPEAC Workshop on Reconfigurable Computing*, pp. 63-72, Gotenborg, Sweden, Jan 2008.
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis "SIMD Vectorization of Histogram Functions" *18th IEEE Int. Conf. on Application-Specific Systems Architectures and Processors (ASAP)* pp. 174-179, Montreal, Canada, Jul 2007.
- J. Tao, **A. Shahbahrami** and B. Juurlink, Rainer Buchty, Wolfgang Karl, Stamatis Vassiliadis, "Optimizing Cache Performance of the Discrete Wavelet Transform Using a Visualization Tool, *Proc. 9th IEEE Int. Symp. on Multimedia*, Dec 2007.
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis "Accelerating Color Space Conversion Using Extended Subwords and the Matrix Register File" *Proc. 8th IEEE Int. Symp. on Multimedia (ISM2006)*, pp. 37-46, San Diego, California, USA, Dec 2006.
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis, "Performance Impact of Misaligned Accesses in SIMD Extensions" *Proc. 17th Annual Workshop on Circuits, Systems and Signal Processing (ProRISC2006)* , pp. 334-342, The Netherlands, Nov 2006.
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis "Limitation of Special-Purpose Instructions for Similarity Measurements in Media SIMD Extensions" *Proc. ACM/IEEE Int. Conf. on Compilers, Architecture, and Synthesis for Embedded Systems (CASES)*, pp. 293-303, Soeul, South Korea, Oct 2006.
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis "Improving the Memory Behavior of Vertical Filtering in the Discrete Wavelet Transform" *Proc. 3rd ACM Int. Conf. on Computing Frontiers* pp. 253-260, Ischia, Italy, 2-5 May 2006
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis, "Efficient Vectorization of the FIR Filter" *Proc. 16th Annual Workshop on Circuits, Systems and Signal Processing (ProRISC2005)* , The Netherlands, Nov 2005.
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis, "Performance Comparison of SIMD Implementations of the Discrete Wavelet Transform" *Proc. 16th IEEE Int. Conf. on Application-Specific Systems Architectures and Processors (ASAP)* Samos, Greece, Jul 23-25, 2005.
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis, " Matrix Register File and Extended Subwords: Two Techniques for Embedded Media Processors" *Proc. 2th ACM Int. Conf. on Computing Frontiers*, Ischia, Italy, 4-6 May 2005.
- Juurlink, **A. Shahbahrami** and S. Vassiliadis "Avoiding Data Conversions in Embedded Media Processors" *The 20th Annual ACM Symposium on Applied Computing* Santa Fe, New Mexico, March 13 -17, 2005.
- **A. Shahbahrami**, B.H.H. Juurlink and S. Vassiliadis, "A Comparison Between Processor Architectures for Multimedia Applications" *Proc. 15th Annual Workshop on Circuits, Systems and Signal Processing (ProRISC2004)*, The Netherlands, Nov 2004.

- **A. Shahbahrani** "The Determination of Initial Condition in Constraint Satisfaction Neural Networks for Medical Images Segmentation" *The 6th Int. Conf. on CSI Computer (CSICS 2001) University of Isfahan, Iran, 20-22 Feb. 2001.*
- **A. Shahbahrani** "A Comparison of Nonparametric Algorithms in Selection of Thresholding Based on Entropy" *Proc. 1st Int. Iranian Conf. on Machine Vision, Image Processing and Applications (MVIP2001), Birjand, Iran, 2001.*
- **A. Shahbahrani** "The Selection of Multiple Threshold Scheme for Image Segmentation Based on Co-Occurrence Matrix" *The 6th Annual Scientific and Research Conference in the University of Guilan, 10-12 March 2000.*
- **A. Shahbahrani** "Simulation of a Environment for Comparison of Different Page Replacement Algorithms in Structural Memory Hierarchy" *The 7th Annual Scientific and Research Conference in the University of Guilan, 5-7 March 2001.*

Referee of Journal Papers

- *IEEE Micro*
- *IEEE Transactions on Very Large Scale Integration Systems*
- *IEEE Transactions on Parallel and Distributed Systems*
- *ACM Transactions on Reconfigurable Technology and Systems*
- *ACM Transactions on Embedded Computing Systems*
- *Microprocessors and Microsystems*
- *Journal of Embedded Computing*
- *Journal of Systems and Software*
- *Electronics Letters*
- *Journal of Computer Science and Technology*
- *EURASIP Journal on Embedded Systems*
- *Iranian Journal of Electrical and Computer Engineering (IJECE)*

Referee of International Conference Papers

- *EUROMICRO symposium on Digital System Design(2004)*
- *IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP'04)*
- *International Conference on Field Programmable Logic and Applications (FPL04)*
<http://www.fpl.itiv.uni-karlsruhe.de>
- *CODES+ISSS 2004 The IEEE/ACM/IFIP International Conference on Hardware/Software Codesign and System Synthesis www.codes-iss.org*
- *Workshop on Application Specific Processors, WASP 2004*
(<http://dna.ucsd.edu/wasp04>)
- *DATE conference (Design Automation and Test in Europe 2005)*
<http://www.dateconference.com>
- *IADIS International Conference Applied Computing 2005 Algarve, Portugal*
- *The 12th Reconfigurable Architectures Workshop (RAW 2005)*
- *Computing Frontiers 2005 (CF05)*
- *8th EUROMICRO Conference on Digital System Design (2005)*
- *15th International Conference on Field Programmable Logic and Applications (FPL2005)*
- *Workshop on Application Specific Processors, WASP 2005*
- *DATE conference (Design Automation and Test in Europe 2006)*
- *Computing Frontiers 2006 (CF06)*
- *The 33rd Annual International Symposium on Computer Architecture (ISCA2006)*

- SAMOS VI: *Embedded Computer Systems: Architectures, MOdeling, and Simulation* (2006)
- ACM SIGPLAN/SIGBED *Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES2006)*
- *The 20th ACM International Conference on Supercomputing (ICS2006)*
- *16th International Conference on Field Programmable Logic and Applications(FPL06)*
- *IEEE 17th International Conference on Application-specific Systems, Architectures and Processors (ASAP2006)*
- *International Symposium on System-on-Chip 2006*,
<http://www.cs.tut.fi/soc/soc2006.html>
- *HiPC - International Conference on High Performance Computing 2006*
- *2007 International Conference on High Performance Embedded Architectures & Compilers*
- *DATE conference (Design Automation and Test in Europe 2007)*
- *ISVLSI, International Symposium on VLSI 2007*, www.inf.ufrgs.br/isvlsi2007
- *17th IEEE International Conference on Field Programmable Logic and Applications (FPL 2007)*
- *International Conference on Design & Technology of Integrated Systems in Nanoscale Era (DTIS'07)*
- *The 25th International Conference on Computer Design (ICCD07)*
- *DATE conference (Design Automation and Test in Europe 2008)*
- *5th International Workshop on Applied Reconfigurable Computing 2009*
(<http://www.arc2009.org/>)
- *ACM International Conference on Computing Frontiers 2009*
(<http://www.computingfrontiers.org/2009/>)
- *The Euro-Par 2009 conference*, <http://europar2009.ewi.tudelft.nl/>
- *IEEE 20th International Conference on Application-specific Systems, Architectures and Processors (2009)*, <http://asap-conference.org>
- *The 38th International Conference on Parallel Processing (ICPP-2009)*
<http://www.cse.ohiostate.edu/icpp2009/>
- *4th International Symposium on Embedded Multicore Systems-on-Chip*
<http://www.uaizu.ac.jp/benab/conferences/mcsoc-09/>
- *3rd Workshop on Highly Parallel Processing on a Chip (HPPC 2009)*
<http://www.hppcworkshop.org/>
- *17th Reconfigurable Architectures Workshop (RAW2010) April 19-20, 2010, Atlanta, USA*, (<http://www.ece.lsu.edu/vaidy/raw/>)
- *15th symposium on Computer Architecture and Digital Systems CADs2010*
<http://cs.ipm.ac.ir/cads2010/index.jsp>
- *15th International CSI Computer Conference (CSICC 2010)*, <http://www.csicc2010.ir/>

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