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I. Education:

Name of the Institution/University and Country	Degree		Year
Indian Institute of Technology (IIT) Bombay, India	Ph. D.	Electrical Engineering (Computer Vision)	May, 1998
Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh	M. Sc. Engineering	Computer Science and Engineering	July, 1994
Bangladesh Institute of Technology (BIT), Khulna, Bangladesh	B.Sc. Engineering	Electrical and Electronic Engineering	August, 1989

II. Career Experiences:

September 2003 – Present: Assistant Professor in the department of Computer Science at the State University New York, Institute of Technology (SUNYIT). Main responsibilities include: teaching computer architecture, pattern recognition, multimedia information processing, image processing and computer vision related courses at the undergraduate and postgraduate level, guiding graduate students, identifying and advancing research in the general areas of computer vision, image analysis, bio-informatics, visualization, multimedia information processing, pattern recognition and human-computer interaction (HCI).

July 2000 – June 2003: Assistant Professor (Visiting) in the department of Computer Science and Engineering at The Pennsylvania State University. Main responsibilities include: teaching computer architecture, image processing and computer vision related courses at the undergraduate and postgraduate level, guiding graduate students and identifying and advancing research in the general areas of computer vision, image analysis, information security, pattern recognition and human-computer interaction (HCI).

July 2000 – June 2003: Director of Computer Vision at Advanced Interface Technologies, Inc. (AI). Main responsibilities include: Writing grant proposals for federal research fund to support AI research and development (R& D), directing R &D effort in finding robust computer vision solution for human motion analysis, classification, behavior-based biometrics, surveillance and multimodal human computer interfaces.

August 99 – June 2000: Assistant Professor (Visiting) in the department of Electrical and Engineering at University of West Florida. Main responsibilities include: teaching digital design and signals and systems related courses at the undergraduate level and conducting research in the general areas of computer vision, image processing and advanced human-computer interaction (HCI).

June 99 – July 1999: Post-doctoral Research in the Department of Electrical and Computer Engineering at the University of Miami. Researching remotely operated vehicle to explore the underwater world.

August 98– March 1999: Center of Excellence (COE) research fellow; Electro-technical Laboratory (ETL); Tsukuba, Japan. Responsibilities include research and development of robust techniques for face detection and tracking system using a space-variant sensor to interface a humanoid robot with human being.

September 1990 - July 1998: Lecturer, in the department of Electrical and Electronics Engineering at Bangladesh Institute of Technology, Chittagong. Main responsibilities include: teaching electrical and electronic engineering related courses at undergraduate level, guiding honors project.

III. Teaching Experiences:

Courses Taught (Graduate Level): Advanced Computer Vision (*two times*) Confluence of Computer Vision and Graphics (*one time*), Image Processing II (*one time*).

Courses Taught (UG Level): Image Processing I (*4 times*), Signals and Systems (*2 times*), Microprocessor & Microcomputer (*2 times*), Digital logic Design (*4 times*), Advanced Electronics (*2 times*), Switch-gear & Protection (*2 times*), Linear Circuits & Systems (*2 times*), and Basic Electrical Engineering (*3 times*).

Graduate Students Co-Supervised: 2 Ph. D. and 5 MS.

Thesis Examiner: 4 Ph.D. and 5 MS.

IV. Scholarships / Honors:

1. Elected to **IEEE Senior Member**, 2004.
2. Listed in **Who's Who in Science and Engineering**, Marquis Who's Who, 2003.
3. **Indian Government scholarship** for graduate study and research (1994 -1998).
4. **Institute Gold medal** for overall academic performance, (1985 -1989).
5. Recipient of **Technical board Scholarship** (1985-1989), **National merit scholarship** (1976-1984).

V. Synergistic Activities:

Institutional and Professional Service:

Graduate Council Member: State University New York Institute of Technology, September 2003 -Present.

Guest Editor: International Journal on Machine Vision and Applications, Special Issue on Human Modeling, Analysis, and Synthesis, 2002.

Journal Reviewer: (1) IEEE - Transactions on Pattern Analysis and Machine Intelligence (PAMI), (2) IEEE - Transactions on Circuits and Systems for Video Technology (CSVT), (3) IEEE - Transactions on System man and cybernetics (IEEE SMC Part B), (4) Computer vision and image understanding (CVIU), (5) Pattern Recognition and (6) International Journal of Modelling and Simulation

Invited Lecture: "Framework for Multimodal Human Computer Interface" International workshop on *Multimodal Communication*, University of Bielefeld, Germany, January9-10, 2003.

Research Funding: Dr. Yeasin helped in writing two successful NSF SBIR grants (**Grant # 0319706 and Grant # 0319687**) amounts: \$ **200 000**, July 2003 to December 2003, (R. Sharma, PI, Senior investigators: M. Yeasin and K. Sengupta).

Participation in workshop and conferences: Participated in many international conferences and symposiums (*e.g.*, ICCV, CVPR, ISRIS, *First Intl. Workshop on emergence, embodiment and cognition*, Japan, Feb. 1999, *First Intl. Workshop on Humanoid and Human Friendly Robot*, Japan, September 1998).

VI. Collaborators & Other Affiliations:

Recent Collaborators: Profs. M. Guizani and L. Yang (University of Western Michigan) Prof. Rangachar Kasturi (University of South Florida), Rajeev Sharma, (PennState), and Prof. S. Chaudhuri (IIT Bombay).

Professional Society Member:

Name, City and Country of issuing agency	Rank of membership	Year issued
Institution of Electrical and Electronic Engineers (IEEE)	Senior Member	2004
IEEE Computer Society	Member	2000

VII. Research interest and Background:

a. **Research Interest:** Dr. Yeasins' chief interest is in the research and development of robust computer vision solution for (i) Human motion analysis, (ii) Classification, (iii) Behavior-based Biometrics, (iv) Image Analysis for Biomedical Applications and (v) Advanced Human-Computer Interfaces. The common underlying theme is to address the issues that would allow robust analysis of all types of images & video information. He has published over 45 technical papers and 5 US patents (submitted).

b. Journal Papers:

1. S. Kettebekov, **M. Yeasin**, and R. Sharma, "Prosody-based Audio Visual co-analysis for co-verbal gesture recognition," IEEE transaction on Multimedia, to appear, 2004.
2. **M. Yeasin**, Ediz Polat and Rajeev Sharma, "A multi-object Tracking Framework for interactive Multimedia Applications", IEEE Transactions on Multimedia Journal, (Special Issue on Multimodal Interfaces and Applications), Vol 6, No. 3, pp. 398-405, June 2004.
3. R. Sharma, **M. Yeasin**, N. Krahnstöver, I. Rauschert, G. Cai, I. Brewer, A. MacEachren, K. Sengupta, "Speech-Gesture Driven Multimodal Interfaces for Crisis Management", to appear in the *Proceedings of IEEE* (special issue on Multimodal Human-Computer Interface), Vol. 91, No. 9, pp. 1327-135, 2003.
4. E. Polat, **M. Yeasin**, R. Sharma, "A Robust Tracking Framework for Collaborative Human Computer Interaction", to appear in the journal of Computer Vision and Image Understanding, Vol. 89, No. 1, pp. 44-69, January 2003.
5. E. Polat, **M. Yeasin**, R. Sharma, "A 2D/3D Model-Based Object Tracking Framework", Pattern Recognition, Vol. 36, No. 9, pp.2127-2141, 2003.
6. L. Walavalkar, **M. Yeasin**, A. Narasimhmurthy and R. Sharma, "Support Vector Learning for gender classification using Audio-Visual Cues", International journal of Pattern Recognition and Artificial Intelligence, Vol. 17, No. 3, pp. 417-439, 2003.
7. **M. Yeasin**, "Optical flow in log-mapped image plane - A new approach", IEEE Trans. on Pattern Analysis and Machine Intelligence, Vol. 24, pp. 125-131, January 2002.
8. N. Krahnstöver, **M. Yeasin** and R. Sharma, "Automatic Acquisition and Initialization of Articulated Models", Machine Vision and Applications, pp. 218-228, Vol.14, No. 3, 2003.
9. Y. Azoz, L. Devi, **M. Yeasin**, R. Sharma, "Tracking Human Arm Using Constraint Fusion and Multiple Cue-based Localization", Machine Vision & Applications, Vol.13, No. 5-6 pp. 286-302, 2003.
10. J. Chen, **M. Yeasin**, and R. Sharma, "Visual Modeling and Evaluation of Surgical Skill", International journal of Pattern Analysis and Applications, Vol. 6, No. 1, pp. 1-11, 2003.
11. **M. Yeasin** and S. Chaudhuri, "Development of an automated image processing system for kinematic analysis of human gait", Real-Time Imaging, Academic Press, vol.6, pp.55-67, 2000.
12. **M. Yeasin** and S. Chaudhuri, "Towards automatic robot program: Learning human skill from perceptual data", IEEE Trans. on Systems Man & Cybernetics-B, pp.180-185, vol. 30, No. 1, 2000.
13. **M. Yeasin** and S. Chaudhuri, "Visual understanding of dynamic hand gestures", Pattern Recognition, pp.1805-1817, vol. 33, No. 11, 2000.
14. K.M. Rahman and **M. Yeasin**, "Microprocessor controller for an adaptive resonant inverter", Journal of Bangladesh Electronic Society, Vol.3, No.1, 1993.

c. Book Chapters:

1. **M. Yeasin**, Rahul Khare and R. Sharma “Appearance – based age classification using Support Vector Machines”, Editor: M. Sarfraz, to appear in the “Computer Aided Intelligent Recognition Techniques and Applications”, John Wiley, June 2004.
2. **M. Yeasin** and R. Sharma, “Foveated Vision Sensors and Image Processing – A Review”, Editors: Srikanta Patnaik and Spyros G. Tzafestas, to appear in the "Machine Learning, Perception and Robot Cognition".
3. R. Sharma, S. Kettebekov and **M. Yeasin**, “Integration of Gesture and Speech in Multimodal Interface”, editors by M.S. Vassiliou and T. Huang, pp.41-54, Rockwell Scientific Company for ARL Advanced Displays and Interactive Displays Federated Laboratory Consortium, 2001.

d. US Patent Pending/Provisional Patent Submitted:

1. R. Sharma, **M. Yeasin** and L. Walavalkar “A method for human gender recognition using audio-visual cues”, (PID no.: 2001-2523), 2001.
2. R. Sharma, **M. Yeasin** and S. Kettebekov, Method of visual and acoustic signal co-analysis for coverbal gesture recognition, (PID no.: 2002-2634), 2002.
3. R. Sharma, **M. Yeasin** and K. Shriram, “VDRESSER: A Method of putting virtual clothes on a human figure in live video image sequence”, (Submitted), 2003.
4. R. Sharma, **M. Yeasin**, R. Khare and Satish Mummareddy A method for human age group classification using visual cue,(Submitted), 2003.
5. R. Sharma, **M. Yeasin** and Satish Mummareddy, “A method for classification of human ethnicity using anthropometrical information and visual cue”, (Submitted), 2004.

e. Journal Papers (Under Review/Preparation):

1. **M. Yeasin**, B. Bullo, and R. Sharma, “Visual measurement of interest level from facial expression” (Under Review).
2. L. Walavalkar, **M. Yeasin**, A. Narasimhmurthy and R. Sharma, “*Multimodal gender classification*”, (Under Preparation).

f. Selected Conference Papers:

1. R.S. Khare, **M. Yeasin**, R. Sharma, “Appearance-based age group classification using support vector machines”, to appear in the International Conferences on Communication Devices and Intelligent Systems (CODIS 04), pp. 484-487, Kolkata, 2004.
2. S. Kettebekov, **M. Yeasin**, R. Sharma, “Improving Continuous Gesture Recognition with Spoken Prosody,” Proc. of Computer Vision and Pattern Recognition (CVPR), pp. 565-570, USA, 2003.
3. E. Polat, **M. Yeasin**, and R. Sharma, “A Tracking Framework for Collaborative Human Computer Interaction,” Proc. of Intl. Conf. on Multimodal Interfaces, pp. 27-32, Pittsburgh, USA, Oct. 2002.
4. S. Kettebekov, **M. Yeasin**, and R. Sharma, “Prosody based co-analysis for continuous recognition of co-verbal gestures,” in Proc. of Intl. Conf. on Multimodal Interfaces, pp. 161-166, Pittsburgh, USA, Oct. 2002.
5. N. Krahnstöver, S. Kettebekov, **M. Yeasin**, and R. Sharma, “iMap: A Real-Time Framework for Natural Multimodal Interaction with Large Screen Displays”, in the Proc. of Intl. Conf. on Multimodal Interfaces, pp.349-354, Pittsburgh, USA, Oct. 2002.
6. S. Kettebekov, **M. Yeasin**, N. Krahnstoever, R. Sharma, "Prosody based Co-Analysis of Deictic Gestures and Speech in Weather Narration Broadcast", Workshop on Multimodal Resources and

Multimodal Systems Evaluation, 3rd Int. Conf. on Language Resources and Evaluation (LREC 2002), Palacio de Congreso de Canarias Las Palmas, Spain, June 2002.

7. L. Walavalkar, **M. Yeasin**, A. Narasimhmurthy and R. Sharma, “*Support Vector Learning for gender classification using Audio-Visual Cues*”, First International Workshop on Support Vector Machines (SVMs), pp.144-159, Niagra Falls, Canada, August 2002.
8. E. Polat, **M. Yeasin**, R. Sharma, “*Multiple Complex Object Tracking Using A Combined Technique*”, IEEE International Conference on Pattern Recognition, pp. 168-173, Quebec city, Canada, August 2002.
9. E. Polat, **M. Yeasin** and R. Sharma, “*Detecting and Tracking Body Parts of Multiple People*”, in the IEEE Intl. Conf. on Image Processing (ICIP-01), Vol.1, pp. 405-408, Greece, 2001.
10. E. Polat, **M. Yeasin** and R. Sharma, “*Tracking Body Parts of Multiple People-A new approach*”, in the IEEE Intl. Conf. on Comp. Vision, pp. 35-42, Vancouver, Canada, July 2001.
11. N. Krahnstöver, **M. Yeasin**, R. Sharma, “*Automatic Acquisition and Initialization of Kinematic Models*”, IEEE Conference on Computer Vision and Pattern Recognition, Technical Sketches, Kauai Marriott, Hawaii, USA, Dec, 2001.
12. N. Krahnstöver, **M. Yeasin** and R. Sharma, “*Towards an unified approach for tracking and analysis of human motion*”, in the IEEE Intl. Conf. on Comp. Vision, pp.47-54, Vancouver, Canada, 2001.
13. **M. Yeasin** and Y. Kuniyoshi, “*Detecting and tracking human face using a space-varying sensor and an active head*”, in the proceedings of the IEEE computer society conference on Computer Vision and Pattern Recognition, pp. 168-173, South Carolina, USA, 2000.
14. **M. Yeasin**, “*Optical flow in log-mapped image plane– A new approach*”, lecture note on computer science, R. Klette, S. Peleg and G. Sommer Eds., pp.252-260, Springer, NY, USA, 01.
15. **M. Yeasin** and S. Chaudhuri, “*Dynamic hand gesture understanding - A new approach*”, in the proceedings of the IEEE signal proc. society Conf. on, pp. 3073 –3076, vol.6, Arizona, USA, 1999.
16. **M. Yeasin** and S. Chaudhuri, “*Visual understanding of dynamic hand gestures*”, Proc. of Intl. Symposium on Intelligent Robotics & Systems (ISIRS'98), Bangalore, India, pp.300-307, 1998.
17. **M. Yeasin** and S. Chaudhuri, “*Automatic generation of robot program code: learning from perceptual data*”, Proceedings of international conference on computer vision, pp. 889-894, Bombay, January 1998.
18. **M. Yeasin** and S. Chaudhuri, “*Vision system for dynamic stability analysis*”, Proceedings of ICVGIP'98, pp. 435-440, Delhi, India, December 1998.
19. **M. Yeasin** and S. Chaudhuri, "A Vision-Based System for Quantification of Human Gait", in the Proc. of ICCIT'98, pp. 168-172, Dhaka, Bangladesh, 1998.
20. **M. Yeasin** and S. Chaudhuri, “*Automatic robot programming by visual demonstration of task execution*”, 8th international conference on advanced robotics (ICAR'97), pp. 913-918, Monterey, California, U.S.A., 1997.
21. A. N. Rajagopalan, **M. Yeasin** and S. Chaudhuri, “*Data clustering using higher order statistics*”, Proceedings of TENCHON'97, pp. 803-806, Brisbane, Australia, December 1997.
22. **M. Yeasin** and S. Chaudhuri, “*Development of an image processing system for automatic gait analysis*”, NCC'97, IIT Madras, pp. 183-187, India, January 1997.

g. Thesis:

1. “*Visual Analysis of Human Motion: Some Applications in Bio-medicine and Dexterous Robot Programming*”, **Ph. D. Thesis**, Indian Institute of Technology, Bombay, India, May, 1998.
2. “*Study and Analysis of Microprocessor Controlled Pulse-Width Modulated Inverter*”, **M. Sc. Thesis**, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, July 1994.