Abhinav Dhall

PERSONAL PARTICULARS	*Date of Birth:*	December 11, 1984	*Gender:*	Male
	Marital Status:	Married	*Country of Citizenship:*	India

CONTACT INFORMATION

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1 Balmain Crescent, ANU,
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RESEARCH INTERESTS

Computer Vision, Image Processing and Human Computer Interaction.

EDUCATION

Ph.D. in Computer Science and Technology   Feb. 2010 - Thesis submitted, Dec 2013
Research School of Computer Science (RSoCS)
Australian National University (ANU), Canberra, Australia

- AUSAID Doctoral Scholar 2010-2013
- Thesis Topic: "Facial Expression Recognition In The Wild: From Individual to Group"
- Advisor : Prof. Tom Gedeon, Dr. Roland Goecke, Prof. Simon Lucey

B.Tech. in Computer Science and Engineering   2002 - 2006
Department of Computer Science and Engineering
DAV Institute of Engineering & Technology (DAVIET), Jalandhar, India.

- Overall Percentage Obtained: 78%
- Thesis Topic : Philips Health Booth
- Advisor : Prof. Sandeep Kath, Mrs Kalpana Ravi (Philips IPR)

HONORS AND LEADERSHIP

- Co-Organised, First Emotion Recognition In The Wild Challenge at ACM International Conference on Multimodal Interfaces (ICMI) 2013.
- Best Student Paper Honourable Paper Award, IEEE Automatic Faces & Gesture Recognition (AFGR) 2013.
- Best doctoral consortium paper award ACM International Conference on Multimedia Retrieval (ICMR) 2013.
- Dean's travel grant 2012 (AUD 6,800) to visit Imperial College London.
- Best paper nomination at IEEE International Conference on Multimedia % Expo (ICME) 2012.
- ANU Vice-Chancellor's travel grant for AFGR 2011 (AUD 1500).
- Honorary mention, One of the four scholars from India invited to attend The 2010 Leadership Development Conference, Canberra, Australia (14th March-17th March, 2010).
- The Australian Leadership Award Scholarship (ALAS) 2010 for a Doctoral program (2010-2013) at any Australian University.
- Samsung India Software Centre, Certificate of Excellence for contribution towards Patent generation and filling A grade patents.
- Member of the Patent Review Committee at Samsung India Software Centre.

PROFESSIONAL EXPERIENCE

Visiting Scholar - Intelligent Behavior Understanding Group, Imperial College London.
April 2013 - July 2013

- Worked with Prof. Stefanous Zaferious and Prof. Maja Pantic on group mood analysis.

Visiting Scholar - Machine Perception Lab, University of California San Diego.
July 2012 - October 2012

- Worked with Prof. Marian Bartlett and Prof. Gwen Littlewort on head pose normalisation using mixture-of-parts models.

Research Intern - Commonwealth Scientific & Industrial Organisation (CSIRO), Australia.
July 2010 - June 2011

- Worked with Professor Simon Lucey on the facial expressions collection using semi-automatic method.

Research Intern - The National Centre for Biometric Studies (NCBS), University of Canberra, ACT, Australia.
July 2010

- Worked with Professor Michael Wagner on real-time face tracking using linear deformable model.

Senior Software Engineer - Samsung Delhi R&D (Samsung India Software Centre)
May 2007 to December 2009

- Worked on computer vision, embedded and shadow graphics library.
- Worked at Multimedia lab, Electrical dept, IIT Delhi under Samsung-IITD research collaboration.
- Member of Patent Review Committee July 2007 to July 2009.

Software Engineer Trainee - Nucleus Software Exports Limited
June 2006 to May 2007

- Worked on e-bussiness solution "BankOnet" product development and deployment at AmBank, Malaysia.

Summer Research Intern - Philips Electronics India Ltd
July 2005 to April 2006

- Designed and developed a prototype for a health booth. Designed smart user iterface which could be understood by an illetrate user.
- Conducted survey regarding health related information in rural people.
- Worked on background subtraction system for mobile phones.

PUBLICATIONS AND PATENTS

Journals -

1. **Abhinav Dhall**, Roland Goecke and Tom Gedon, Automatic Group Facial Expression Analysis, IEEE Transaction on Affective Computing (Under review).

2. **Abhinav Dhall**, Roland Goecke and Tom Gedon, Facial Expressions In Challenging Conditions: Databases and Protocols, Computer Vision & Image Understanding (Under Review).

3. Nandita Sharma, **Abhinav Dhall**, Tom Gedon and Roland Goecke, Thermal Facial Pattern Recognition for Stress Using a Spatio-Temporal Approach, EURASIP Journal of Image and Video Computing (Under review).

4. Karan Sikka, **Abhinav Dhall** and Marian Bartlett, Weakly Supervised Pain Localization and Classification with Multiple Segment Learning, Image & Vision Computing, Best of Automatic Faces & Gesture Recognition 2013. (Minor review).

5. Jyoti Joshi, Roland Goecke, **Abhinav Dhall**, Sharifa Alghowinem, Micael Wagner, Michael Breakspear, Julien Epps, Gordon Parker, Multimodal Assistive Technologies for Depression Diagnosis and Monitoring, Journal of MultiModal User Interfaces 2013.

6. **Abhinav Dhall**, Roland Goecke, Simon Lucey and Tom Gedeon, A Semi-Automatic Method for Collecting Richly Labelled Large Facial Expression Databases from Movies, IEEE Multi-Media 2012.

7. Akshay Asthana, Miles de la Hunty, **Abhinav Dhall** and Roland Goecke, Facial Expression Transfer via Deformable Models and Parametric Correspondence, IEEE Transactions of Visualization and Computer Graphics (TVCG) 2012.

Conferences -

1. **Abhinav Dhall**, Karan Sikka, Gwen Littlewort, Roland Goecke and Marian Bartlett, A Discriminative Parts Based Model Approach for Fiducial Points Free and Shape Constrained Head Pose Normalisation, WACV 2014.

2. **Abhinav Dhall**, Roland Goecke, Jyoti Joshi, Michael Wagner and Tom Gedeon, Emotion Recognition In The Wild Challenge 2013, In Proceedings of the ACM International Conference & Multimodal Interfaces, ICMI 2013.

3. Ibrahim Radwan, **Abhinav Dhall** and Roland Goecke, Monocular Image 3D Human Pose Estimation under Self-Occlusion, In Proceedings of the IEEE International Conference on Computer Vision, ICCV 2013.

4. Shyam Rajagopalan, **Abhinav Dhall** and Roland Goecke, Self-Stimulatory Behaviours in the Wild for Autism Diagnosis, In Proceedings of the IEEE International Conference on Computer Vision, ICCV Workshop CBSICCV 2013.

5. OV Ramana Murthy, Ibrahim Radwan, **Abhinav Dhall** and Roland Goecke, On the Effect of Human Body Parts in Large Scale Human Behaviour Recognition, In Proceedings of the International Conference on Digital Image Computing: Techniques and Applications, DICTA 2013.

6. Nicholas Cummins, Jyoti Joshi, **Abhinav Dhall**, Vidhyasaharan Sethu, Roland Goecke and Julien Epps. Diagnosis of Depression by Behavioural Signals: A Multimodal Approach. In Proceedings of the ACM International Conference on Multimedia MM Workshop AVEC 2013.

7. Jyoti Joshi, **Abhinav Dhall**, Roland Goecke and Jeffery F. Cohn, Relative Body Parts Movements, In Proceedings of the Fifth Biannual Humaine Association Conference on Affective Computing and Intelligent Interaction ACII 2013.

8. Nandita Sharma, **Abhinav Dhall**, Tom Gedeon and Roland Goecke, Modeling Stress Using Thermal Facial Patterns: A Spatio-Temporal Approach, In Proceedings of the Association Conference on Affective Computing and Intelligent Interaction, ACII 2013.

9. **Abhinav Dhall**, Context based Facial Expressions In The Wild, , In Proceedings of the Fifth Biannual Humaine Association Conference on Affective Computing and Intelligent Interaction, ACII 2013.

10. **Abhinav Dhall**, Expression Recognition In The Wild: From Individual to Groups, Doctoral Consortium, In Proceedings of the 2013 ACM International Conference on Multimedia Retrieval, ICMR 2013. [**Best Doctoral Consortium Paper**]

11. Karan Sikka, **Abhinav Dhall** and Marian Bartlett, Weakly Supervised Pain Localisation Using Multiple Instance Learning, Accepted as Oral paper In Proceedings of the IEEE Automatic Faces & Gesture Recognition, AFGR 2013.

12. **Abhinav Dhall**, Jyoti Joshi, Ibrahim Radwan and Roland Goecke, Finding Happiness In Social Context, In Proceedings of the Asian Conference on Computer Vision, ACCV 2012.

13. Ibrahim Radwan*, **Abhinav Dhall***, Jyoti Joshi and Roland Goecke, Regression Based Pose Estimation with Automatic Occlusion Detection and Rectification, In Proceedings of the IEEE International Conference on Multimedia % Expo, IEEE ICME 2012. (* Equal first authors) [**Nominated for best paper award**].

14. **Abhinav Dhall** and Roland Goecke. Group Expression Intensity Estimation in Videos via Gaussian Processes. In Proceedings of the International Conference on Pattern Recognition, ICPR 2012.

15. Jyoti Joshi, **Abhinav Dhall**, Roland Goecke, Michael Breakspear and Gordon Parker. Neural-Net Classification For Spatio-Temporal Descriptor Based Depression Analysis. In Proceedings of the International Conference on Pattern Recognition, ICPR 2012.

16. Ibrahim Radwan, **Abhinav Dhall** and Roland Goecke. Correcting Pose Estimation with Implicit Occlusion Detection and Rectification, In International Conference on Pattern Recognition, ICPR 2012.

17. **Abhinav Dhall**, Roland Goecke, Simon Lucey and Tom Gedeon, Static Facial Expressions In Tough Conditions: Data and Evaluation Protocol And Benchmark, In Proceedings of the IEEE International Conference on Computer Vision, ICCV Workshop BEFIT 2011.

18. **Abhinav Dhall**, Akshay Asthana and Roland Goecke, A SSIM-Based Approach for Finding Similar Facial Expressions. In Proceedings of the IEEE Automatic Face and Gesture Recognition Conference FG Workshop EmoSpace 2011.

19. **Abhinav Dhall**, Akshay Asthana, Roland Goecke and Tom Gedeon, Emotion Recognition Using PHOG and LPQ features. In Proceedings of the IEEE Automatic Face and Gesture Recognition Conference FG Workshop FERA 2011.

20. **Abhinav Dhall**, Akshay Asthana and Roland Goecke, Facial Expression Based Automatic Album Creation. In Proceedings of the International Conference on Neural Information Processing, ICONIP 2010.

21. **Abhinav Dhall**, Gaurav Sharma, Rajen Bhatt and Ghulam Mohuiddin Khan, Adaptive Digital Makeup, In Proceedings of the International Symposium on Visual Computing, ISVC 2009.

22. Gaurav Sharma, **Abhinav Dhall**, Santanu Chaudhary and Rajen Bhatt, Hierarchical System for Content based Categorization and Orientation of Consumer Images, In the proceedings of the 3rd International Conference on Pattern Recognition & Machine Intelligence, PReMI 2009.

23. Rajen Bhatt, **Abhinav Dhall**, Gaurav Sharma and Santanu Chaudhury, Efficient Skin Region Segmentation using Low Complexity Fuzzy Decision Tree Model, In proceedings of the IEEE INDICON 2009, India.

Patents -

1. Gaurav Sharma, **Abhinav Dhall**, Rajen Bhatt and Santanu Chaudhary, Method and system for content based image categorization, US20110164815 A1.

2. Gaurav Sharma, **Abhinav Dhall**, Rajen Bhatt and Santanu Chaudhary, Method and system for orienting a disoriented image, US20110164812 A1.

3. Rajen Bhatt and **Abhinav Dhall**, High Speed Skin-like Region Segmentation based on Fuzzy Decision Tree Initialized Generalized Gaussian RBF Network.

4. **Abhinav Dhall**, Brajesh Kumar and Naveen Sharma, Distance based viewing settings in DTV, 1756/KOL/2008.

5. **Abhinav Dhall**, Brajesh Kumar and Naveen Sharma, Ultra low bandwidth video conferencing technique.

6. **Abhinav Dhall** and Naveen Sharma, Method for improving the appearance of a caller in video conferencing for better presentation, 1126/KOL/2007.

7. **Abhinav Dhall** and Naveen Sharma, Method for selecting background in video conferencing, 1381/KOL/2007.

References Professor Tom Gedeon Email : tom@cs.anu.edu.au
Professor, and formerly Head, Department of Computer Science, Australian National University.

Dr. Roland Goecke E-mail : roland.goecke@anu.edu.au
1) Associate Professor, University of Canberra, Australia.
2) Research Fellow, RSISE, Australian National University.