Kishor Upla

Curriculum Vitae

EC211N, EC Department
SVNIT
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Education

2008-2016 **Ph. D.**

Dhirubhai Ambani Institute of Information and Communication Technology (DAIICT), Gandhinagar, India.

Thesis Title: Some new techniques of Multi-resolution Image fusion

Thesis Supervisor: Dr. Manjunath V. Joshi

2001-2005 **M. E. in Communication System Engineering**

L. D. College of Engineering, Ahmedabad, India.

Percentage 80%

1997-2001 **B. E. in Electronics and Communication**

Government Engineering College, Modasa, India.

Percentage 85%

Experience

2009-till date **Assistant Professor**

Electronics and Communication Department, *Sardar Vallabhbhai National Institute of Technology (SVNIT)*, Surat, Gujarat, India.

2005-2009 **Assistant Professor**

Electronics and Communication Department, *Government Polytechnic*, Palanpur, Gujarat, India.

2002-2005 **Lecturer**

Electronics and Communication Department, *Sankalchand Patel College of Engineering (SPCE)*, Visnagar, Gujarat, India.

Professional Recognition/Award/Prize/Certificate,Fellowship received

2019-2020 **ERCIM Post-doctoral Fellowship**

(Norwegian University of Science and Technology (NTNU), Gjøvik, Norway)

ERCIM, France

2020 **Best paper award at IEEE CVPR-2020 workshops in PBVS**

http://vcipl-okstate.org/pbvs/20/awards.html

PBVS workshop in CVPR international conference

2020 **Challenge Winner in IEEE PBVS CVPR-2020 workshop**

PBVS workshop in CVPR international conference

2014 **Recipient of Travels Grant Support of USD $1205**
IEEE Geoscience and Remote Sensing Society (GRSS)

2011 **Recipient of Asian Travel Grant of USD $750**
IEEE Geoscience and Remote Sensing Society (GRSS)

2011 **Recipient of Student Travel Grant Support of USD $500**
IEEE International Conference on Multimedia and Expo (ICME)

Research Interests

Computer vision and image processing — Machine learning/Deep learning, Object detection/recognition, Information fusion, Multi-resolution image fusion/Pan-sharpening, Image restoration, Image super-resolution, Bio-medical image fusion, Multi-spectral and hyperspectral image processing, Low resolution face recognition

Publications

Book

2019 Joshi, Manjunath V. and Kishor P. Upla. *Multi-resolution Image Fusion in Remote Sensing*. Cambridge University Press.

Book Chapter

2012 Prakash P. Gajjar, Manjunath Joshi and Kishor P. Upla. "Image Restoration: Fundamentals and Advances (Digital Imaging and Computer Vision)". In: ed. by Bahadir Kursat Gunturk and Xin Li. First. CRC press. Chap. Transform domain based learning for super-resolution restoration, pp. 175 –215.

Journal Publications

2021 Chudasama, V., K. Nighania, K. Upla, K. Raja, R. Ramachandra, and C. Busch. "E-ComSupResNet: Enhanced Face Super-Resolution Through Compact Network". In: *IEEE Transactions on Biometrics, Behavior, and Identity Science*, pp. 1–1.

2021 Chudasama, Vishal and Kishor Upla. "Computationally efficient progressive approach for single-image super-resolution using generative adversarial network". In: *Journal of Electronic Imaging* 30.2, pp. 1 –36.

2021 Chudasama, Vishal M. and K. Upla. "RSRGAN: computationally efficient real-world single image super-resolution using generative adversarial network". In: *Mach. Vis. Appl.* 32, p. 3.

2021 Patel, Heena and Kishor P. Upla. "DepthFuseNet: an approach for fusion of thermal and visible images using a convolutional neural network". In: *Optical Engineering* 60.1, pp. 1 –29.

2020 Vishal, Chudasama and Kishor Upla. "E-ProSRNet: An enhanced progressive single image super-resolution approach." In: *Computer Vision and Image Understanding*, p. 103038.

2018   Sharad Joshi Kishor P. Upla, Nitin Khanna. "Consistent pan-sharpening based on multistage joint and dual bilateral filters". In: *SPIE Journal of Applied Remote Sesning* 12.2.

2017   K. P. Upla, Manjunath V. Joshi and Nilay Khatri. "A regularized pan-sharpening approach based on self-similarity and Gabor prior". In: *International Journal of Remote Sensing* 38.4.

2015   Upla, K. P., M. V. Joshi, and P. P. Gajjar. "An Edge Preserving Multiresolution Fusion: Use of Contourlet Transform and MRF Prior". In: *IEEE Transactions on Geoscience and Remote Sensing* 53.6, pp. 3210–3220.

2015   Upla, K. P., Sharad Joshi, M. V. Joshi, and P. P. Gajjar. "Multi-resolution Image Fusion using Edge Preserving Filters". In: *SPIE Journal of Applied Remote Sesning* 9.1, pp. 0960251–09602526.

Conference Publications

2021 Eranki, Vasu, Vishal Chudasama, and Kishor Upla. "Predicting the Time Left to Earthquake Using Deep Learning Models". In: *Information Management and Machine Intelligence*. Ed. by Dinesh Goyal, Valentina Emilia Bălaș, Abhishek Mukherjee, Victor Hugo C. de Albuquerque, and Amit Kumar Gupta. Singapore: Springer Singapore, pp. 489–496.

2021 Prajapati, Kalpesh, Vishal Chudasama, Heena Patel, Kishor Upla, Kiran Raja, Raghavendra Ramachandra, and Christoph Busch. "Unsupervised Real-World Super-resolution Using Variational Auto-encoder and Generative Adversarial Network". In: *Pattern Recognition. ICPR International Workshops and Challenges*. Ed. by Alberto Del Bimbo, Rita Cucchiara, Stan Sclaroff, Giovanni Maria Farinella, Tao Mei, Marco Bertini, Hugo Jair Escalante, and Roberto Vezzani. Cham: Springer International Publishing, pp. 703–718.

2020 Chudasama, V., H. Patel, K. Prajapati, K. Upla, R. Ramachandra, K. Raja, and C. Busch. "TherISuRNet - A Computationally Efficient Thermal Image Super-Resolution Network". In: *2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, pp. 388–397.

2020 Chudasama, Vishal and Kishor Upla. "ISRGAN: Improved Super-Resolution Using Generative Adversarial Networks". In: *Advances in Computer Vision*. Ed. by Kohei Arai and Supriya Kapoor. Cham: Springer International Publishing, pp. 109–127.

2020 Chudasama, Vishal M., Kalpesh P. Prajapati, and K. Upla. "Computationally Efficient Super-Resolution Approach for Real-World Images". In: *National Conference on Computer Vision, Pattern Recognition, Image Processing, and Graphics, Springer, Singapore*, pp. 143–153.

2020 Patel, H. and K. P. Upla. "Night Vision Surveillance: Object Detection using Thermal and Visible Images". In: *2020 International Conference for Emerging Technology (INCET)*, pp. 1–6.

2020 Patel, Heena, Kalpesh Prajapati, Vishal Chudasama, and Kishor P. Upla. "An Approach for Fusion of Thermal and Visible Images". In: *Emerging Technology Trends in Electronics, Communication and Networking*. Ed. by Shilpi Gupta and Jignesh N. Sarvaiya. Singapore: Springer Singapore, pp. 225–234.

2020 Prajapati, K., V. Chudasama, H. Patel, K. Upla, R. Ramachandra, K. Raja, and C. Busch. "Unsupervised Single Image Super-Resolution Network (USISResNet) for Real-World Data Using Generative Adversarial Network". In: *2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, pp. 1904–1913.

2020 Prajapati, Kalpesh, Vishal Chudasama, and Kishor Upla. "A Light Weight Convolutional Neural Network for Single Image Super-Resolution". In: vol. 171. Third International Conference on Computing and Network Communications (CoCoNet'19), pp. 139–147.

2020 Rai, A., V. Chudasama, K. Upla, K. Raja, R. Ramachandra, and C. Busch. "ComSupResNet: A Compact Super-Resolution Network for Low-Resolution Face Images". In: *2020 8th International Workshop on Biometrics and Forensics (IWBF)*, pp. 1–6.

2019 Dave, Ishan R., Vikas Chaudhary, and Kishor P. Upla. "Simulation of Analytical Chemistry Experiments on Augmented Reality Platform". In: *Progress in Advanced Computing and Intelligent Engineering*. Ed. by Chhabi Rani Panigrahi, Arun K. Pujari, Sudip Misra, Bibudhendu Pati, and Kuan-Ching Li. Singapore: Springer Singapore, pp. 393–403.

2019 Gupta, Rahul Kumar, Shreeja Lakhlani, Zahabiya Khedawala, Vishal Chudasama, and Kishor P. Upla. "A Deep Learning Paradigm for Automated Face Attendance". In: *Computer Vision Applications*. Ed. by Chetan Arora and Kaushik Mitra. Singapore: Springer Singapore, pp. 39–50.

2019 Rai, A., R. Karnani, V. Chudasama, and K. Upla. "An End-to-End Real-Time Face Identification and Attendance System using Convolutional Neural Networks". In: *2019 IEEE 16th India Council International Conference (INDICON)*, pp. 1–4.

2018 Patel, Heena and K. Upla. "AECNN: Autoencoder with Convolutional Neural Network for Hyperspectral Image Classification". In: *Workshop on Computer Vision Applications (WCVA) at ICVGIP*.

2018 V. Chudasama, K. Upla. "A critical review of generative adversarial networks based on stability criteria". In: *International Joint Conferences on Advances in Engineering and Technology. McGraw-Hill*, p. 4854.

2017 Chaudhary, V., I. R. Dave, and K. P. Upla. "Automatic visual inspection of printed circuit board for defect detection and classification". In: *2017 International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET)*, pp. 732–737.

2017 Dave, I. R. and K. P. Upla. "Computer aided diagnosis of Malaria disease for thin and thick blood smear microscopic images". In: *2017 4th International Conference on Signal Processing and Integrated Networks (SPIN)*, pp. 561–565.

2017 Dhengre, N., K. P. Upla, H. Patel, and V. M. Chudasama. "Bio-medical image fusion based on phase-congruency and guided filter". In: *2017 Fourth International Conference on Image Information Processing (ICIIP)*, pp. 1–5.

2017   Mistry, J., A. K. Misraa, M. Agarwal, A. Vyas, V. M. Chudasama, and K. P. Upla. "An automatic detection of helmeted and non-helmeted motorcyclist with license plate extraction using convolutional neural network". In: *2017 Seventh International Conference on Image Processing Theory, Tools and Applications (IPTA)*, pp. 1–6.

2015   Dhengre, N., K. P. Upla, and R. D. Trivedi. "Multimodal biomedical image fusion: Use of log-Gabor and guided filters with non-subsampled contourlet transform". In: *2015 Third International Conference on Image Information Processing (ICIIP)*, pp. 6–11.

2014   Joshi, S., K. P. Upla, and P. K.Shah. "Consistent pan-sharpening based on multistage joint and dual bilateral filters". In: *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, pp. 2522–2525.

2014   Upla, K. P., M. V. Joshi, and P. P. Gajjar. "Pan-sharpening: Use of difference of Gaussians". In: *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, pp. 4922–4925.

2014   Upla, K. P., S. Joshi, and M. C. Patel. "An edge preserving multi-resolution image fusion: Use of joint bilateral filter". In: *IEEE InternationalGeoscience and Remote Sensing Symposium (IGARSS)*, pp. 2495–2498.

2013   Upla, K. P., P. P. Gajjar, and M. V. Joshi. "Pan-sharpening based on Non-subsampled Contourlet Transform detail extraction". In: *Fourth National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG)*, pp. 1–4.

2011   Upla, K. P., P. P. Gajjar, and M. V. Joshi. "Multiresolution fusion using contourlet transform based edge learning". In: *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, pp. 523–526.

2011   Upla, K. P., P. P. Gajjar, M. V. Joshi, A. Banerjee, and V. Singh. "A fast approach for edge preserving super-resolution". In: *IEEE International Conference on Multimedia and Expo (ICME)*, pp. 1–6.

International Exposure

Nov.2019-Oct.2020	ERCIM Post-doctoral fellow at Norwegian University of Science and Technology (NTNU), Norway.
September 2020	Attended and presented our work at INTAP 2020 held physical mode at NTNU, Norway.
June 2020	Attended and presented our work CVPR 2020 held virtual mode.
April 2020	Attended and presented our work at IEEE IWBF 2020 held virtual mode.
December 2017	Presented my paper in seventh International Conference on Image Processing Theory, Tools and Applications (IPTA 2017) at Montreal, Canada.
February 2017	Attended Winter School on Machine Learning in Biometrics at Delhi.
February 2017	Attended IEEE International Conference on Identity, Security and Behaviour Analysis at Delhi.
April 2016	Attended International Workshop on Remote Sensing Image Analysis under the India-Trento Program for Advanced Research (ITPAR) Phase-III at Indian Institute of Technology, Bombay, INDIA.

December 2015	Presented my paper in the IEEE International Conference on Image Information Processing (ICIIP -2015) at Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, INDIA.
July 2014	Presented my papers in the *IEEE International Geoscience and Remote Sensing Symposium 2014 (IGARSS-2014)* at Quebec, Canada.
December 2013	Presented my papers in the National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG 2013) at Indian Institute of Technology Jodhpur, India.
July 2012	Presented my co-authored paper in the *IEEE International Geoscience and Remote Sensing Symposium 2012 (IGARSS-2012)* at Munich, Germany.
July 2011	Presented my paper in the *IEEE International Geoscience and Remote Sensing Symposium 2011 (IGARSS-2011)* at Vancouver, Canada.
July 2011	Presented my paper in the *IEEE International Conference on Multimedia and Expo 2011 (ICME-2011)* at Barcelona, Spain.
December 2010	Attended the seventh Indian Conference on Vision, Graphics and Image Processing (ICVGIP 2010) at Indian Institute of Technology Chennai, India.

Languages

Gujarati	Native	*Mother Tongue*
Hindi, English	Fluent	*Daily practice, all work performed in English*

Interests

Sport	Cricket, Vollyball

Membership

2002-2005	Member of Indian Society for Technical Education (ISTE)
2009-2015	Student member of Institute of Electrical and Electronics Engineers (IEEE)
2015-cont.	Member of Institute of Electrical and Electronics Engineers (IEEE)

Skills

Programming	Matlab,C, Python
Publishing softwares	Latex, MS Office

References

DAIICT	**Dr. Manjunath V. Joshi**
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NTNU, Norway	**Dr. Christoph Busch**
	Professor
	NTNU, Norway
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