

# Vikas Ramachandra

University of California, San Diego  
CALIT2 (Center for Telecom and IT)  
Electrical and Computer Engineering Dept  
P.O. Box 92093  
La Jolla, CA  
(858) 534 5669  
vikas@ucsd.edu  
<http://videoprocessing.ucsd.edu/vikas/>

3899 Nobel Drive, Apt 1322  
La Jolla, CA 92122  
(858) 658 0653

## EDUCATION

- ◇ **University of California, San Diego**, La Jolla, CA.  
Ph.D. in Electrical Engineering, Expected graduation: 2010.  
M.S. in Electrical Engineering, Expected: Mar 2007.  
Focus: Signal and Image Processing.
- ◇ **Birla Institute of Technology and Science (BITS), Pilani**, India  
Bachelor of Engineering [B.E.] (Honors) in Electrical Engineering, July 2005.  
GPA: 9.4/10.

## RESEARCH INTERESTS

Video processing, machine learning, statistical signal processing, document image processing, computer vision.

## RESEARCH PROJECTS

- ◇ Current research in spatio-temporal smoothing based motion compensated Frame rate conversion of video. Advisor: Prof. Truong Nguyen, UCSD.
- ◇ Research project: MAP based video superresolution and investigation of image statistics inspired prior models. (Fall 2005 – Winter 2006)

## PUBLICATIONS

An efficient real time low bit rate video codec. (with Shikha Tripathi and R.C.Jain, BITS, Pilani) *7th Asian Conference on Computer Vision (ACCV) 2006*. (Available at Lecture Notes in Computer Science (LNCS), Springer Verlag, pp. 500-508, Jan. 2006).  
Won the best paper award in BITS, Pilani ECE student paper contest 2005.

## SOFTWARE

- ◇ MATLAB, C, C++, JAVA, T<sub>E</sub>X

## WORK

### EXPERIENCE

- ◇ **Intern**, Hewlett Packard (HP) Labs, India, (Jan-Jul 2005)
  - Carried out information theoretical analysis of the print-scan channel model.
  - Came up with a working demo for the verification of printed documents using a normal/off-the-shelf scanner, based on a robust large scale information hiding scheme.
  - Came up with application ideas including marksheet verification, currency note verification etc.
  - Proposed a novel pipeline for 'transmitting' multimedia on paper.

◇ **Intern**, NVIDIA Corp. (Summer 2006)

Worked on developing novel image and video resolution algorithms based on classification of image regions and learning the interpolation filters for each class using training data. Applications include bettering the quality of internet video on popular sites like YouTube and Google video.

◇ **Summer Fellow**, Indian Institute of Science (IISc), Bangalore, India (Summer 2004)

Developed an MPEG compliant audio codec in C on the Analog Devices Blackfin platform.

◇ **Research Assistant**, Video Processing Lab,  
ECE Department, UCSD (Fall 2005- Present)

◇ **Relevant coursework**

Image Processing, Filter banks and wavelets, Machine Intelligence, Parameter Estimation, Random processes, Statistical Methods for Bioinformatics, Computer Vision, Coding and Information Theory, Digital Signal Processing.

REFERENCES Available on request.