

Siddhartha Chandra

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Education

2014–today	PhD in Machine Vision INRIA Galen & Centrale-Supélec Paris
2007–2013	Bachelor of Technology (Honours) + M.S. by Research IIT Hyderabad. CGPA: 9.3/10
2006–2007	AIEEE All India Rank 2532 (99.64 percentile) IIT All India Rank 3879 (99.14 percentile)
2004–2006	ISC XIIth Board Overall Percentage: 94.0% <i>St. Joseph's College, Allahabad</i>
2004	ICSE Xth Board Overall Percentage: 95.4% <i>St. Joseph's College, Allahabad</i>

Research Positions

2014–today	PhD Student, INRIA Galen & Centrale-Supélec Paris Research Advisor: Prof. Iasonas Kokkinos
2009–2013	Research Assistant, Center for Visual Information Technology, IIT Hyderabad
2010–2011	Research student visitor, Visual Geometry Group, University of Oxford

Publications

2016	Deep, Dense, and Low-Rank Gaussian Conditional Random Fields. Siddhartha Chandra, Iasonas Kokkinos. <i>ArXiv Report</i>
2016	Fast, Exact and Multi-Scale Inference for Semantic Image Segmentation with Deep Gaussian CRFs. Siddhartha Chandra, Iasonas Kokkinos. <i>ECCV, Netherlands</i>
2016	Human Joint Angle Estimation and Gesture Recognition for Assistive Robotic Vision. Alp Guler, Siddhartha Chandra, Iasonas Kokkinos et.al. <i>Oral, ECCV Workshop</i>
2015	Accurate Human-Limb Segmentation in RGB-D images for Intelligent Mobility Assistance Robots. Siddhartha Chandra, S. Tsogkas, I. Kokkinos. <i>Oral, ICCV Workshop</i>
2015	Surface Based Object Detection in RGBD Images. Siddhartha Chandra, Grigoris Chrysos, Iasonas Kokkinos. <i>Oral Presentation, BMVC, Wales</i>
2013	Partial Least Squares Kernel for Computing Similarities between Video Sequences. Siddhartha Chandra, C.V. Jawahar. <i>Oral Presentation, ICPR, Japan</i>
2013	Sparse Discriminative Fisher Vectors in Visual Classification. Vinay Garg, Siddhartha Chandra, C.V. Jawahar. <i>ICVGIP, India</i>
2012	Learning Non-Linear Supspaces using K-RBMs. Siddhartha Chandra, Shailesh Kumar, C.V. Jawahar. <i>CVPR, USA</i>
2012	Learning Hierarchical Bag of Words using Naive Bayes Clustering. Siddhartha Chandra, Shailesh Kumar, C.V. Jawahar. <i>ACCV, Korea</i>

Relevant Research Projects

Deep Learning	Multi-Scale Inference for Dense-Labeling Tasks with Deep Gaussian CRF Learning multi-scale pairwise interactions via Gaussian-CRFs for a variety of dense-labeling and regression tasks in an end-to-end deep learning architecture.
Human Pose ROS	Real-Time Human Joint Angle Estimation (<i>part of successfully concluded EU Project</i>) Research for MOBOT (EU Project): deep learning pipeline implemented for real-time performance on the Robotics Operating System.

Deep Learning	Facial Landmark Localization using Deep Structured Prediction End-to-end deep DPMs for face detection and landmark localization.
Deep Learning	LSTMs for semantic segmentation Training sophisticated LSTMs for semantic segmentation.
Deep Learning	Human part segmentation in RGB-D Images Learning to parse humans in RGB-D images from diverse data using deep networks.
Pictorial Structures	Surface based Object Detection for RGB-D Images Employing 3-D models for better initializing a mixture of Deformable Part Models.
3-D Modelling	3-D Modelling and Description of 3-D surfaces Modelling Feature Extraction for Point Correspondences in 3-D meshes
Action Recognition	Partial Least Squares Kernel for Action Recognition PLS regression for computing similarity between two videos.
Detection Tracking Recognition	Detecting, Tracking and Recognizing Humans in Hollywood Movies Deformable parts based model to detect human upper bodies in video frames, tracking, and recognition based on colour features.

Relevant Challenging Programming Projects

- ★ Efficient Implementation of the Conjugate Gradients Method for sparse, dense systems on the GPU in **Caffe** using **cudablas**, and **cudaspase** libraries.
- ★ **Caffe** Implementation for end-to-end training of Gaussian CRFs.
- ★ **Caffe** Implementation for end-to-end training of sophisticated Spatial-LSTMs.
- ★ Real-Time Human-Pose Estimation framework using **Caffe** and ROS.

Relevant Courses Taken

Research	Machine Learning, Computer Vision, Pattern Recognition, Digital Image Processing, Artificial Intelligence, Computer Graphics, Speech Systems
Other	Data Structures, Algorithms, Theory of Computation, Operating Systems, Computer Organization, Software Engineering, Database Management, Compilers, Computer Networks

Other Positions

- ★ Working as **System Administrator** for CVN, Centrale-Supélec Paris. *Setting up GPU servers.*
- ★ Worked as **System Administrator** for CVIT, IIIT Hyderabad. *Familiar with Sun-Grid Engine, among other Linux Administration tools.*
- ★ Worked as a **Teaching Assistant** for the following courses at IIIT Hyderabad through the 3rd – 5th year: **Computer Vision** (1 semester), **C Programming** (2 semesters), **Algorithms** (1 semester), **Information Technology** (2 semesters).

Skill Set

Programming	C, C++, Python, Bash, MATLAB
Frameworks	Caffe , ROS, Eigen, CUDA, SPAMS
Server Side	ModPython, PHP