Senanayak Sesh Kumar Karri

Research name	K. S. Sesh Kumar	
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Academic positions

Data Science Institute, Imperial College London.

Research Fellow, (Sept 2018 - Present).
- Advisor : Prof. Yi-Ke Guo

Statistical machine learning group, Imperial College London.

Research Associate, (Dec 2017 - Aug 2018).
- Advisor : Dr. Marc Deisenroth

Kolmogorov group, IST Austria.

Post-Doctoral Research, (Oct 2016 - Oct 2017).
- Advisor : Prof. Vladimir Kolmogorov

Education

SIERRA, École Normale Supérieure/INRIA, Paris, France.

Doctoral Student, (May 2013 - Sept 2016).
- Advisor : Prof. Francis Bach

École Normale Supérieure, Cachan, FRANCE.

Masters in MVA (Mathématiques Vision et Apprentisage), (Sept 2012- Apr 2013).
- Advisor : Prof. Francis Bach

International Institute of Information Technology, Hyderabad, INDIA.

B.Tech, Computer Science, August 2003.
- Advisor : Prof. C. V. Jawahar

Preprints

1) K. S. Sesh Kumar, A. Barbero, S. Jegelka, S. Sra, F. Bach, "Convex Optimization for Parallel Energy Minimization". *In arXiv:1503.01563, 2015.*

Publications

1) K. S. Sesh Kumar, F. Bach and T. Pock, "Fast Decomposable Submodular Function Minimization using Constrained Total Variation". *In Neural Information Processing Systems, 2019.*

2) Riccardo Moriconi, K. S. Sesh Kumar and Marc P. Deisenroth, "High-Dimensional Bayesian Optimization with Manifold Gaussian Processes", *In Bayesian Deep Learning workshop at NeurIPS, 2019.*

3) Riccardo Moriconi, K. S. Sesh Kumar and Marc P. Deisenroth, "High-dimensional Bayesian optimization with projections using quantile Gaussian processes", *Optimization Letters, 2019.*

4) K. S. Sesh Kumar and Marc P. Deisenroth, "Differentially Private Empirical Risk Minimization with Sparsity-Inducing Norms", *In Privacy Preserving Machine Learning*

(PPML), 2018.

5) K. S. Sesh Kumar and F. Bach, "Active-set Methods for Submodular Minimisation Problems". *In Journal for Machine Learning Research, 2017*.

6) K. S. Sesh Kumar and F. Bach, "Maximizing submodular functions using probabilistic graphical models". *In workshop on Discrete Optimization for Machine Learning (DISCML-NIPS), 2013*.

7) K. S. Sesh Kumar and F. Bach, "Convex Relaxation for Learning Bounded Treewidth Decomposable Graphs". *In Proceedings of International Conference on Machine Learning (ICML), 2013*S.

8) D. A. Gómez Járegui, P. Horain, M. K. Rajagopal and K. S. Sesh Kumar, Real-Time Particle Filtering with Heuristics for 3D Motion Capture by Monocular Vision, *In Proceedings of IEEE International Workshop on Multimedia Signal Processing (MMSP), 2010* (poster).

9) K. S. Sesh Kumar, Sukesh Kumar and C. V. Jawahar, On Segmentation of Documents in Complex Scripts, *In Proceedings of International Conference on Document Analysis and Recognition (ICDAR), 2007* (poster).

10) K. S. Sesh Kumar, Anoop M. Namboodiri and C. V. Jawahar, Learning Segmentation of Documents with Complex Scripts, *In Proceedings of Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), 2006* (oral).

11) Sachin Rawat, K. S. Sesh Kumar, Million Meshesha, Indraneel Deb Sikdar, A. Balasubramanian and C. V. Jawahar, A Semi-Automatic Adaptive OCR for Digital Libraries, *In Proceedings of IAPR Workshop on Document Analysis Systems (DAS), 2006* (oral).

12) K. S. Sesh Kumar, Anoop M. Namboodiri and C. V. Jawahar, Learning to Segment Document Images, *In Proceedings of International Conference on Pattern Recognition and Machine Intelligence (PReMI), 2005* (oral).

Academic/Work Experience

WILLOW - project team, INRIA, Paris, FRANCE.

Research Engineer **September 2012 - April 2013**

- Face detection/recognition algorithms.

Mentors: Dr. Ivan Laptev, Dr. Josef Sivic.

SIERRA - project team, INRIA, Paris, FRANCE.

Internship **January, 2012 - August, 2012**

- Convex relaxations for learning bounded treewidth decomposable graphs.

Mentors: Prof. Francis Bach.

Computer Vision and Geometry Group, ETH, Zurich, SWITZERLAND.

Internship **April, 2011 - August, 2011**

- Real Time 3D Reconstruction on a cluster of GPUs.

Mentors: Dr. Luca Ballan.

Telecom Sud Paris, Evry, FRANCE.

Research Engineer **February, 2010 - March, 2011**

- GPUCV, MediaGPU.

Mentors: Prof. Patrick Horain.

International Institute of Information Technology, Hyderabad, INDIA.

Research Assistant **April, 2003 - May, 2006**

- Indian Language OCRs, Document Segmentation.

Mentors: Prof. C. V. Jawahar.

Professional Experience

AMD Research and Development India Pvt. Ltd., Hyderabad, INDIA.

GPGPU Engineer **June, 2006 - January, 2010**