

Kumar Sricharan

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RESEARCH INTERESTS Statistical Signal Processing, Machine Learning, Information Fusion, High-dimensional Manifold Learning

EDUCATION **University of Michigan**

PhD. candidate, EE: Systems, December 2011 (expected)

- Dissertation title: "Performance driven fusion for sensor information analysis"
- Advisor: Alfred O. Hero III

M.A., Statistics, December 2011 (expected), CGPA: 8.0/9

M.S., EE: Systems, December 2008, CGPA: 8.0/9

Indian Institute of Technology Madras

B.Tech., Electrical Engineering, May 2006, CGPA: 8.65/10

SELECTED PUBLICATIONS K. Sricharan, R. Raich and A. O. Hero, "*k*-nearest neighbor estimation of entropies with confidence," IEEE International Symposium on Information Theory (ISIT), April 2011.

K. Sricharan, A. O. Hero and B. Rajaratnam, "*A Local Dependence Measure and Its Application to Screening for High Correlations in Large Data Sets*," 14th International Conference on Information Fusion, April 2011.

K. Sricharan and A. O. Hero, "*Weighted k-NN graphs for Rényi entropy estimation in high dimensions*," IEEE Workshop on Statistical Signal Processing (SSP), March 2011.

K. Sricharan, R. Raich and A. O. Hero, "*Statistical estimation of entropy with confidence*," submitted to the Transactions on Information Theory, January 2011.

K. Sricharan, R. Raich and A. O. Hero, "*Estimation of non-linear functionals of densities with confidence*," Technical Report, Communications and Signal Processing Laboratory (CSPL), The University of Michigan, December 2010.

K. Sricharan, R. Raich and A. O. Hero, "*Boundary compensated k-NN graphs*," IEEE Workshop on Machine Learning in Signal Processing (MLSP), August 2010.

K. Sricharan, R. Raich and A. O. Hero, "*Optimized intrinsic dimension estimation*

using nearest neighbor graphs,” IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). September 2009.

K. Sricharan, R. Raich and A. O. Hero, ” *Global performance prediction for divergence-based image registration,*” IEEE Workshop on Statistical Signal Processing (SSP). September 2009.

PROFESSIONAL EXPERIENCE **General Motors**, Warren, Michigan
Summer Internee **June-August, 2007**
Classified driving behavior based on statistical analysis of headway time-series data.

Indian Institute of Science, Bangalore, India
Summer Researcher **May - July, 2005**
Investigated the use of hand-based biometric techniques for human verification.

TEACHING EXPERIENCE *Graduate Student Instructor* **September, 2006 - May, 2007**
GSI for undergraduate Electricity and Magnetism Lab. Physics 128/241, University of Michigan, Fall 2006/Winter 2007.

RELEVANT COURSEWORK Statistical Machine Learning (**EECS 545**), Estimation, Filtering and Detection (**EECS 564**), Probability and Random Processes (**EECS 501**), Theory of Probability (**STATS 621**), Large Sample theory (**STATS 611**), Probabilistic graphical models (**STATS 700**), Statistical Computing (**STATS 606**), Mathematical methods in Signal Processing (**EECS 551**), Mathematical methods in Statistics (**STATS 520**)

CO-CURRICULAR SKILLS Packages: MATLAB, R, SCILAB
Languages: C, C++

HONORS AND AWARDS Member, Mensa IQ Society
Member, Tau Beta Pi, Engineering Honor Society
Gold Medalist, Indian Chemistry Olympiad (InCHO), 2002
Certificate of Honor, The Physics Society, Chennai, India, 2002
National Scholarship Awardee, C.B.S.E, 2002

REFERENCES Available on request