Anand Jerry George

+91 8197767631 | anandjez@gmail.com| anandgeorge@alum.iisc.ac.in

Education

Indian Institute of Science Bangalore

Master of Technology (M.Tech.), Signal Processing *2019 – 2021*

- Relevant coursework: Random Processes, Matrix Theory, Linear and Nonlinear Optimization, Adaptive Signal Processing, Digital Image Processing, Detection and Estimation, Pattern Recognition and Neural Networks, Topics in Statistical Methods, Time Frequency Analysis, Information Theory, Real Analysis, Measure and Integration
- CGPA : 9.9/10
- Project Advisor: Prof. Navin Kashyap
- Project Title: Sampling from high-dimensional probability distributions

National Institute of Technology Calicut

Bachelor of Technology (B.Tech.), Electronics and Communication Engineering *2011 – 2015*

- CGPA : 8.98/10
- Project Advisor: Prof. P.C. Subramaniam
- Project Title: Design and implementation of 18-bit Delta-Sigma Analog to Digital Converter (ADC) for audio applications

Work Experience

Texas Instruments Bangalore

Analog Characterization Engineer *2015 – 2019*

- Worked on the design and characterization of world's fastest 18-bit Successive Approximation Register (SAR) ADC.
- Chosen as budding talent among the new hires.
- Presented a paper on digital error correction techniques for ADCs at TI Technical Conference (TITC).

Relevant Projects

Robust hypothesis testing *Sep 2021 – Present*

Advisor: Dr. Clément L. Canonne

- Working on understanding the effect of robustness requirements in hypothesis testing problems.
- Derived the sample complexity of robust sparse Gaussian mean testing.

Sampling from high-dimensional probability distributions *Jul 2020 – Jul 2021*

Advisor: Dr. Navin Kashyap

- Developed sampling techniques for probability distributions supported on a lattice.
- Explored MCMC methods such as Langevin Monte Carlo and Hamiltonian Monte Carlo.

Iterative algorithms that converge to doubly stochastic matrices *Feb 2021 – May 2021*

Advisor: Dr. Navin Kashyap

- Proposed several alternatives to the Sinkhorn algorithm that converge to doubly stochastic matrices.
- Proved the convergence of one of the proposed algorithms using techniques from non-linear Perron-Frobenius theory.

Areas of Interest

Statistical Inference and Learning
Information Theory
High-dimensional Statistics
Markov Chain Monte Carlo

Technical Skills

Languages: Python, Matlab
Libraries: NumPy, Matplotlib

Publications

An MCMC method to sample from lattice distributions *2021*
Authors: A. J. George and N. Kashyap
In IEEE International Symposium on Information Theory (ISIT), 2021.
Available at https://arxiv.org/abs/2101.06453

Patents

Capacitor calibration *2018*
Inventors: A. J. George, R. Soundararajan, P. Visvesvaraya
Patent Number: 10038453(USPTO)

Multi-bit successive-approximation register analog-to-digital converter *2019*
Inventors: R. Soundararajan, P. Visvesvaraya, A. J. George
Patent Number: 10484001(USPTO)

Gain correction for multi-bit successive-approximation register *2020*
Inventors: S. K. R. Naru, A. J. George, S. Dusad, P. Visvesvaraya
Patent Number: 10790841(USPTO)

Scholastic Honors

Rank 2 in the Graduate Aptitude Test in Engineering (GATE) examination *2019*
Paper: Electronics and Communication (EC)
104,782 candidates appeared for the examination

References

Dr. Navin Kashyap
Professor
Department of Electrical Communication Engineering
Indian Institute of Science, Bangalore
nkashyap@iisc.ac.in

Dr. Clément L. Canonne
Lecturer
School of Computer Science
The University of Sydney
clement.canonne@sydney.edu.au

Dr. Chandra Sekhar Seelamantula
Professor
Department of Electrical Engineering
Indian Institute of Science, Bangalore
css@iisc.ac.in