

BIKRAMJIT DAS

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ACADEMIC POSITIONS

- September 2019 – present: Associate Professor (tenured), ESD, Singapore Univ. of Tech. & Design.
- October 2012 – August 2019: Assistant Professor, ESD, Singapore Univ. of Tech. & Design.
- September 2009 – August 2012: Post-doctoral Fellow, RiskLab & Dept. of Mathematics, ETH Zürich.

EDUCATION

- PH.D., August, 2009; M.S. (Operations Research), May, 2008. CORNELL UNIVERSITY, Ithaca, USA.
- M. STAT., May, 2004; B. STAT., May, 2002. INDIAN STATISTICAL INSTITUTE, Kolkata, India.

RESEARCH INTERESTS
Theory: applied probability, statistics, optimization.
Applications: rare event analysis; risk modeling and analysis; queueing theory; network analysis.

PUBLICATIONS

- A. Dhara, K. Natarajan, and B. Das, *Worst-case expected shortfall with univariate and bivariate marginals* (2019), **INFORMS Journal of Computing** (forthcoming).
- B. Das and V. Fasen-Hartmann, *Conditional excess risk measures and multivariate regular variation* (2019), **Statistics & Risk Modeling**, 36, 1-23.
- H. Bernhard and B. Das, *Heavy-tailed random walks, buffered queues and hidden large deviations* (2020), **Bernoulli**, 26(1), 61-92.
- B. Das and V. Fasen-Hartmann, *Risk contagion under regular variation and asymptotic tail independence* (2018), **Journal of Multivariate Analysis**, 165, 194-215.
- B. Das and S. I. Resnick, *Hidden regular variation under full and strong asymptotic dependence* (2017), **Extremes**, 20(4), 873-904.
- B. Das and S. Ghosh, *Detecting tail behavior: mean excess plots with confidence bounds* (2016), **Extremes**, 19, 325-349.
- B. Das and S. I. Resnick, *Generation and detection of multivariate regular variation and hidden regular variation* (2015), **Stochastic Systems**, 5(2), 195-238 (electronic).
- B. Das, S. Engelke and E. Hashorva, *Extremal behavior of squared-Bessel processes attracted to Brown-Resnick processes* (2015), **Stochastic Processes and their Applications**, 125(2), 780-796.
- B. Das, P. Embrechts and V. Fasen, *Four theorems and a financial crisis* (2013), **International Journal of Approximate Reasoning**, 54(6), 701-716.
- B. Das, A. Mitra, and S. I. Resnick, *Living on the multi-dimensional edge: seeking hidden risks using regular variation* (2013), **Advances in Applied Probability**, 45(1), 139-163.
- B. Das and S. Ghosh, *Weak limits for exploratory plots in extreme value analysis* (2013), **Bernoulli**, 19(1), 308-342.
- J. Beran, B. Das, and D. Schell, *On robust tail index estimation for linear long-memory processes* (2012), **Journal of Time Series Analysis**, 33(3), 406-423.
- B. Das and S. I. Resnick, *Detecting a conditional extreme value model* (2011), **Extremes**, 14(1), 29-61.
- B. Das and S. I. Resnick, *Conditioning on an extreme component: Model consistency with regular variation on cones* (2011), **Bernoulli**, 17(1), 226-252.
- B. Das and S. I. Resnick, *QQ-plots, random sets and data from a heavy-tailed distribution* (2008), **Stochastic Models**, 24 (1), 103-132.

RECENT
MANUSCRIPTS
(SUBMITTED)

- S. D. Ahipasaoglu, B. Das and Z. Sun, *A Note on The Classification and Complexity of Assortment Problems under Marginal Distribution Model*.
- B. Das, V. Fasen-Hartmann and C. Klüppelberg, *Tail probabilities of random linear functions of regularly varying random vectors*.
- B. Das, A. Dhara, and K. Natarajan, *On the heavy-tail behavior of the distributionally robust newsvendor model with moment constraints*.
- B. Das and M. Kratz, *Risk concentration under multivariate second order regular variation*.
- B. Das and S. Ghosh, *Common friends in a preferential attachment model*.

GRANTS

- **PI** - MOE Tier II : “Learning from common connections in social networks”, 2018-2021.
- **Co-PI** - MOE Tier II: “Linking water availability to hydropower supply”, 2018-2021.
- **Co-PI** - MIT-SUTD IDC: “Incentive mechanisms for patient routing in EDs”, 2015-2018.
- **PI** - MIT-SUTD IDC: “The role of social learning in the design of social mechanisms”, 2014-2015.
- **PI** - MOE Tier II : “Dynamic congestion games in deterministic and stochastic environments”, 2013-2016.
- **PI** - SUTD start-up: “Dependence in extremes”, 2012- 2015.
- **Co-PI** - FP-7 (European commission, Marie Curie actions): “Risk analysis, ruin and extremes”, 2012-2016.

TEACHING
EXPERIENCE

- UNDERGRADUATE COURSES:
The Analytics Edge, Fall 2019. SUTD
Statistics, Spring 2018, Spring 2019, Spring 2020. SUTD
Probability, Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018. SUTD
Simulation, Fall 2014, Fall 2015, Fall 2016, Fall 2017. SUTD
Modeling the Systems World, Spring 2013. SUTD
Advanced Mathematics II: Linear Algebra and Vector Calculus, Fall 2012. SUTD
Introduction to Stochastic Processes, Summer 2007. CORNELL UNIVERSITY
- GRADUATE COURSES:
Stochastic Models, Fall 2013, Spring 2015, Spring 2018, Spring 2019, Spring 2020. SUTD
Measure Theoretic Probability (6 lectures), Summer 2017. SUTD
The Theory of Extremes and Point Processes, Spring 2010, Spring 2011. ETH ZÜRICH

STUDENT
SUPERVISION

- Abhishek Pal Majumdar (post-doc), 2019 -.
- Nikolas Tsakas (post-doc), 2014-2015.
- Current PhD students: Gengling Dai, Zeyu Sun (joint supervision).
- PhD student: Harald Bernhard (2017, Associate, J.P. Morgan).
- Bachelor/ Semester thesis: Harald Bernhard (ETH Zürich), Daria Schwander (ETH Zürich).
- PhD thesis committee member for Yunpeng Li, Giorgio Sartor, Tushar Vaidya.
- Master’s thesis committee: Aditya Ranjan (SUTD), Snigdha Panigrahi (ISI), Moumanti Podder (ISI).
- Fabio Coppini, Summer 2015 (summer intern).

EXTERNAL SERVICES

- Chair, East-Asian and Pacific Regional Committee, **Bernoulli Society**, 1/2020 –12/2021.
- Editorial board member, **Stochastic Models**, 2019 – present.
- Editorial board member, **Dependence Modeling**, 2012 – 2017.
- Reviewed more than 50 articles for major journals in Probability, Statistics and Operations Research: *Advances in Applied Probability, African Diaspora Journal of Mathematics, ASTIN Bulletin, Bernoulli Journal, Computational Statistics and Data Analysis, Dependence Modeling, Extremes, European Journal of Operational Research, Insurance and Mathematical Economics, Journal of Applied Probability, Journal of Econometric Theory, Journal of Multivariate Analysis, Journal of Nonparametric Statistics, Journal of Risk and Insurance, Journal of Royal Statistical Society (Series B), Journal of Statistical Planning and Inference, Methodology and Computing in Applied Probability, Operations Research, Probability and Mathematical Statistics, Sankhya (Series A), SIAM Journal on Financial Mathematics, Scandinavian Actuarial Journal, Scandinavian Journal of Statistics, Stochastic Models, Stochastic Processes and its Applications, Studies in Theoretical and Applied Statistics, Systems Engineering, The Annals of Applied Probability*.

UNIVERSITY SERVICES	<ul style="list-style-type: none"> ▪ Chair, ESD Faculty Search Committee, SUTD, 2019 – present. ▪ Member: Advisory Committee on Library and Information Services, SUTD, 2019 – present. ▪ Member: Institutional Review Board, SUTD, 2018 – present. ▪ PhD Qualifying examination committee (ESD, SUTD): 2013 – present. ▪ Co-lead, Financial services focus track, ESD undergraduate program, 2016 – 2019. ▪ Graduate committee member: ESD PhD program at SUTD: 2012 – 2018. ▪ GPA, Grading and Honours System Review Committee, 2016. ▪ New course proposal: <i>Simulation Modelling and Analysis</i> (2018).
CONFERENCE AND WORKSHOP ORGANIZATION	<ul style="list-style-type: none"> ▪ <i>Workshop in Heavy-tailed distributions and Extreme Value Theory</i>, ISI Kolkata, January 2013. ▪ <i>Summer School on Stochastic Models for Complex Processes</i>, Disentis, Switzerland, July 2010. ▪ <i>Graduate student's Weekly Probability Seminar</i>, Cornell University, USA in 2007.
ACADEMIC VISITS	<ul style="list-style-type: none"> ▪ LinkedIn, Mountain view, June 2015, June 2018, July 2019 ▪ Karlsruhe Institute of Technology, July 2015, Mar 2016, July 2018 ▪ TU Munich, July 2017 ▪ Cornell University, June 2015, January 2016 ▪ MIT, January – July 2016 ▪ ESSEC Paris, May 2014, April 2016 ▪ ISI Kolkata April 2013, August 2014 ▪ ETH Zurich, April 2014 ▪ University of Lausanne, May 2011
PRESENTATIONS	<ul style="list-style-type: none"> ▪ 2019 IMS Singapore; EVA Zagreb, Croatia; LUISS Rome, Italy. ▪ 2018 ISMP Bordeaux, France; BIRS Oaxaca, Mexico; PCM 125, ISI Kolkata, India; Karlsruhe Ins. of Tech., Germany. ▪ 2017 EVA TU Delft, Netherlands; TU Munich. ▪ 2016 Columbia U, New York City, USA; ESSEC Paris, France; Fields Institute, Toronto, Canada; Workshop at Karlsruhe, Germany. ▪ 2015 ANZAPW Noorootpa, Australia; EVA Ann Arbor; APS INFORMS Istanbul, Turkey; CFEM New York City, USA. ▪ 2014 Stochastic Networks Workshop Bedlowo, Poland; RARE Nankai U, China; ESSEC Paris, France; INSEAD Singapore. ▪ 2013 World Statistics Congress Hong Kong; NUS Singapore; APS INFORMS Costa Rica. ▪ 2012 IMS APRM Tsukuba, Japan; ISI Kolkata, India; ISI Delhi, India. ▪ 2011 CUHK Hong Kong; EVA Lyon, France. ▪ 2010 UNIL Lausanne, Switzerland, TU Berlin, Germany; TU Munich, Germany, WIAS, Berlin, Germany; Conference on Multivariate distributions, Maresias, Brazil; Vilnius conference, Lithuania. ▪ 2009 ETH Zurich; Univ Lyon, France; ORIE Cornell U Ithaca, USA; Tilburg U, Netherlands; Lehigh U, USA; EVA Fort Collins USA. ▪ 2008-2007 ETH Zurich; Recent Advances in Probability ISI Kolkata, India; NEPS New York City, USA.
STATISTICAL CONSULTING	<ul style="list-style-type: none"> ▪ Analysis of randomness in lottery games: Singapore Pools, 2015, 2018, 2020. ▪ Risk analysis of flood data for Kernkraftwerk Gösgen-Däniken, 2010-2011.
COMPUTER SKILLS	C, FORTRAN, Matlab, Python, R, S-Plus.
OTHER INTERESTS	Crosswords, Reading, Running.
REFERENCES	Upon request.