KISHOR PATIL

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Rue Albert Einstein 140/B117, Valbonne 06560, France

RESEARCH INTERESTS

Stochastic Modelling, Queueing theory, Reinforcement learning, Mean Field Limits, Stochastic Approximation.

EDUCATION

Ph.D., Telecommunications and Information Processing, Ghent University — Dec. 2015 - Sept. 2019
M.Tech., Industrial Engineering and Operations Research, IIT Bombay (GPA: 9.16/10) — Jul. 2012 - Jun. 2014
B.Tech., Electronics and Telecommunication, SGGSIET Nanded (GPA: 8.43/10) — Jul. 2008 - Jun. 2012

RESEARCH EXPERIENCE

Postdoctoral Fellow — Oct. 2019 - Present
INRIA, Sophia Antipolis, France
Advisor: Dr. K. Avrachenkov
Stochastic approximation and reinforcement learning with application in page crawling .

Ph.D. Research — Dec. 2015 - Sep. 2019
Ghent University, Ghent, Belgium
Advisors: Prof. D. Fiems, Dr. K. De Turck
Stochastic modelling of energy harvesting wireless sensor networks.

Visiting Research Fellow — Sep. 2018 - Nov. 2018
Laboratoire des Signaux et Systèmes, CentraleSupélec, Paris, France
Supervisor: Dr. K. De Turck
Optimal control in large scale wireless sensor networks - A mean field approach

Masters Thesis — May. 2013 - Jun. 2014
IIT Bombay, Mumbai, India
Advisor: Prof. N. Hemachandra
Firm User-set Interactions in the Context of Admission Control Queues - Equilibrium sets

PROFESSIONAL EXPERIENCE

Analyst - Business Consulting — Jul. 2014 - Oct. 2015
HSBC Data Processing Centre, Bangalore, India
Global Investigation Analytics
Model development, deployment, validation and tuning with Statistical methods.

JOURNAL PUBLICATIONS

- **K. Patil** , M. Jafri, D. Fiems and A. Marin. Stochastic Modeling of Depth Based Routing in Underwater Sensor Networks. *Ad Hoc Networks* 1570-8705 (19) : 132-141, 2019
- **K. Patil**, K. De Turck, and D. Fiems. Optimal data collection in wireless sensor networks with correlated energy harvesting. *Annals of Telecommunication* 1958-9395 : 1-12, 2018.
- **K. Patil**, and D. Fiems. The value of information in energy harvesting sensor networks. *Operations Research Letters* 46 (3) : 362-366, 2018.
- **K. Patil**, K. De Turck, Koen and D. Fiems. A two-queue model for optimising the value of information in energy-harvesting sensor networks. *Performance Evaluation* 0166-5316 (119) : 27-42, 2017.
- **K. Patil**, K. De Turck, and D. Fiems. Optimal control in large scale wireless sensor networks - A mean field approach . *Performance evaluation, Submitted - under revision,* 2019.
- N. Hemachandra, S. Tripathi, and **K. Patil**. Equilibrium points and equilibrium sets of some GI/M/1 queues *Queueing Systems, Submitted - under revision,* 2019.

TEACHING EXPERIENCE

Ghent University
Teaching Assistant, Department of TELIN, Ghent University

C003399 Computer Intensive Statistical Methods — Spring 2018

IIT Bombay
Teaching Assistant, Department of IEOR, IIT Bombay

- **IE 616** Decision Analysis and Game Theory — Spring 2014
- **IE 605** Engineering Statistics — Autumn 2013

PROCEEDINGS AND REPORTS

- K. Avrachenkov, **K.Patil** and G. Thoppe. Change Rate Estimation and Optimal Freshness in Web Page Crawling, *In VALUETOOLS 2020 - 13th EAI International Conference on Performance Evaluation Methodologies and Tools*. Springer International Publishing, Accepted.
- **K. Patil**, K. De Turck, and D. Fiems. Optimal Data Collection in Hybrid Energy-harvesting Sensor Networks. *Analytical and Stochastic Modelling Techniques and Applications* 9845:239–252, 2016.
- N. Hemachandra, S. Tripathi, and **K. Patil**. Equilibrium sets of some $GI/M/1$ queues (with more examples). *IIT Bombay* 2016.

SELECTED TALKS

- **K. Patil**, and K. De Turck, Koen and D. Fiems — INRIA, 2019
  Performance evaluation of large-scale wireless sensor networks - A mean field approach.
- **K. Patil**, and K. De Turck, Koen and D. Fiems — IIT Bombay 2019
  Stochastic Modelling of energy harvesting wireless sensor networks
- **K. Patil**, M. Jafri, D. Fiems and A. Marin — StochMod 2018
  Performance evaluation of depth based routing in underwater sensor networks
- **K. Patil**, and K. De Turck, Koen and D. Fiems — ECQT 2018
  Optimal control in wireless sensor networks: a mean-field approach

ADDITIONAL TRAINING

Workshops

- Summer school on Numerical methods for stochastic models: mean-field, CIRM, Marseille — summer 2017
- Introduction to High performance Computing, Ghent University — Spring 2017
- Workshop on Mathematica, Ghent university — Autumn 2016

Selected Coursework

- E003700 - Game Theory with Engineering Applications — Autumn 2018
- E014230 - Stochastic Processes — Autumn 2017
- CS 709 - Convex Optimization — Autumn 2013
- IE 647- Applied Integer Programming — Autumn 2013

SKILL SET

Programming Languages	Python, C, SQL, AMPL, R
Computational/ Utility Tools	MATLAB, Mathematica, LaTeX
Statistical Tools	R, SAS
Platforms	Mac OS (X), Linux (Ubuntu)

EXTRA-ACADEMIC ACTIVITIES

- Jury member of master thesis committee; Thesis entitled "The P2Pool mining pool - An analysis of a distributed cryptographically secured database". — Oct. 2017
- Volunteering at master thesis fair at Ghent university to give the information on department's research domains so that students can choose their thesis topic. — Feb. 2017