Utsav Sadana

Contact Information

Ph.D. Candidate, Department of Decision Sciences
HEC Montréal

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https://utsav19.github.io/

Education

HEC Montréal, Canada — **2017 - Present**
Ph.D., Management Science
Advisor: Georges Zaccour

University of Illinois at Urbana-Champaign — **Sep 2019 - Feb 2020**
Visiting Scholar, Coordinated Science Laboratory
Mentor: Tamer Başar

Indian Institute of Technology (IIT) Kanpur, India — **2012 - 2017**
B.Tech - M.S. (Dual Degree)

B.Tech., Materials Science and Engineering
Passed with Distinction

M.S., Economics
Advisor: Debayan Pakrashi

Publications

M. Rudnianski, U. Sadana, and H. Bestougeff. Bayesian Networks and Games of Deterrence. In Petrosyan, L. A. and Mazalov, V. V., editors, *Recent Advances in Game Theory and Applications: European Meeting on Game Theory, Saint Petersburg, Russia, 2015, and Networking Games and Management, Petrozavodsk, Russia, 2015* (pp. 201–224). Cham, Switzerland: Springer, 2016.

U. Sadana, P.V. Reddy and G. Zaccour. Nash equilibria in non-zero sum differential games with impulse control. Under review at *Operations Research*, 2019.

U. Sadana, P.V. Reddy and G. Zaccour. Open-loop and Feedback Nash equilibrium in scalar linear-state differential games with impulse control. In preparation for submission at *Automatica*, 2020.

U. Sadana, T. Başar, P.V. Reddy and G. Zaccour. Sampled-data Nash equilibrium in scalar linear-state differential games with impulse control. Working paper.

U. Sadana, P.V. Reddy and G. Zaccour. Feedback Nash equilibrium in non-zero sum differential games with impulse control. Working paper.

Talks and Presentations

Nash equilibria in non-zero sum differential games with impulse control.

- *Optimization Days*, Montréal, Canada, May 2019.
- *11th Workshop on Dynamic Games in Management Science*, Montréal, Canada, October 2019.

Industry Experience

Summer Intern at ORT France, Paris, 2015
Research Internship with Michel Rudnianski

- Established some properties of the games associated with Graphs of Deterrence in order to develop inference schemes for the European Commission FP7 research project LEILA.

Awards and Achievements

- PBEEE Quebec-India PhD Research Scholarship. Awarded to 3 Indian Ph.D. students. *['19]*
- FRQNT (Government of Quebec) Doctoral Research Award (B2X). *['19]*
- FRQNT International Internship scholarship for a 6-month internship at UIUC. *['19]*

- J.A. DeSève Excellence Scholarship, HEC Montréal. Awarded to 1 Ph.D. student every year. *['18]*
- J.A. DeSève Admission Scholarship, HEC Montréal Foundation. *['17]*
- Admission Scholarship, Chair of Game Theory and Management, GERAD & HEC Montréal. *['17]*
- Graduate Research Award (MHRD, India) to pursue Masters at IIT Kanpur. *['16]*
- Merit-cum-Means Scholarship, IIT Kanpur. *['13,'14,'15]*
- 2-month Research Grant, ORT France, Paris. *['15]*

References

Georges Zaccour, Chair of Game Theory and Management, Professor, Department of Decision Sciences, HEC Montreál, georges.zaccour@hec.ca.
Michèle Breton, Professor, Department of Decision Sciences, HEC Montréal, michele.breton@hec.ca.
Erick Delage, Canada Research Chair in Decision Making under Uncertainty, Professor, Department of Decision Sciences, HEC Montreál, erick.delage@hec.ca.
Tamer Başar, Swanlund Endowed Chair and Center for Advanced Study Professor, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, basar1@illinois.edu.
Puduru Viswanadha Reddy, Assistant Professor, Department of Electrical Engineering, IIT - Madras, vishwa@ee.iitm.ac.in.

Technical Skills

- **Programming Languages** Matlab, C, Python
- **Other Tools** LaTeX, Stata, YALMIP, CPLEX

Academic Service

- Session assistant (Information Theory), Allerton Control Conference, 2019.