

Atul Singh ARORA

PERSONAL

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RESEARCH

- Current** | PhD Thesis, UNIVERSITÉ LIBRE DE BRUXELLES (ULB), Belgium
Quantum Cryptography and Communication
Advisor: Prof. Jérémie ROLAND
Recently solved an interesting problem about quantum weak coin flipping, a cryptographic primitive. Started studying for the next project, quantum communication complexity.
A.S.A., S. Weis, J. Roland. [arXiv:1811.02984](https://arxiv.org/abs/1811.02984) (accepted at QIP; submitted to STOC)
- 2015-16 | Master's Thesis, INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH (IISER), MOHALI, India
Contextuality in a Deterministic Quantum Theory
Advisor: Prof. Arvind
Concluded that contextuality is not a necessary feature of quantum mechanics and proposed an alternative, non functional-consistency, bolstered by an explicit construction.
A.S.A., K. Bharti, Arvind. [arXiv:1607.03498](https://arxiv.org/abs/1607.03498) (submitted to Physics Letters A)
- SUMMER 2015 | Intern, UNIVERSITY OF SIEGEN, Germany
Towards a macroscopic test of local realism
Advisor: Prof. Otfried GÜHNE
Constructed a Bell inequality using observables bounded in phase space to probe local realism using macroscopic variables.
A.S.A., A. Asadian. [Phys. Rev. A 92, 061207](https://arxiv.org/abs/1607.03498)

EDUCATION

- present** | Doctorat en Sciences de l'ingénieur et technologie,
OCT 2016 | Université libre de Bruxelles (ULB), Belgium.
- JULY 2016 | Bachelor and Master of Science with PHYSICS major,
JULY 2011 | Indian Institute of Science Education and Research (IISER), Mohali, India.
CPI: 9.4 /10. Graduated with rank two. [| Detailed List of Exams](#)

RECOGNITION

- DEC 2016 | Two year research fellowship from the FNRS (Fonds National Recherche de Science), through the FRIA grant.
- 2016 | Top 5% in the physics stream of the Graduate Aptitude Test in Engineering (GATE), India.
Obtained a 92.3 percentile in the national graduate physics exam, Joint Entrance Screening Test (JEST), India.

- 2015 Awarded the *Junior Research Fellowship (JRF-NET)* from the Council of Scientific and Industrial Research, India.
Awarded the *DAAD WISE* fellowship for a summer internship in Germany.
- 2013-16 Awarded the Certificate of Merit for the best academic performance for a given semester, twice by IISER. Was among the highest scorers four other times.
- 2012 Awarded the *KVPY* fellowship for my work on Stepper Motor Control, by DST, India.

LANGUAGES

HINDI: Fluent
ENGLISH: Fluent
PUNJABI: Intermediate
FRENCH: Basic

INTERESTS

Technology, Open-Source, Programming;
Philosophy—Ethics, Books—non-fiction;
Fitness; Piano, Guitar.

Bachelor and Master of Science with a major in PHYSICS

EXAM	GRADE	CREDIT HRS
Corporate Finance (Valuation)	25	6
Financial Statement Analysis	28	6
Statistics	27	6
Theory of Finance	26	6
Quantitative Methods for Finance	30	6
Econometrics	24	6
Derivatives	31	6
Management of Financial and Insurance Companies	30	6
Business Law	31	6
Investment Banking	28	6
Behavioral Models for Economics and Finance	29	6
Numerical Methods for Finance	29	6
Advanced Derivatives	30	6
Fixed Income (Advanced Methods)	30	6
English Language	30	4
French Language	31	4
Internship		8
Final Thesis		20
	Total	120
	GPA	28.61