

## Education

- Jan 2016–19 **PhD in Computer Science**, TECHNICOLOR R&D AND TELECOM PARIS, France.  
**Thesis:** Learning representations for robust audio-visual scene analysis  
**Advisors:** Prof. Slim Essid, Prof. Gaël Richard (Telecom Paris)  
Dr. Alexey Ozerov, Dr. Ngoc Duong, Dr. Patrick Pérez (then at Technicolor)  
**Reviewers:** Dr. Josef Sivic (INRIA / ENS, France), Prof. Tuomas Virtanen (TUT, Finland)  
◦ Proposed novel approaches that fuse audio and visual modalities to robustly perform scene understanding tasks such as event classification, audio source separation/detection, visual object localization. Manuscript at <https://pastel.archives-ouvertes.fr/tel-02115465>
- 2014–15 **Master in Sound and Music Computing**, UNIVERSITAT POMPEU FABRA, Barcelona.  
**Thesis:** Improving audio retrieval through content and metadata categorization  
**Advisors:** Prof. Xavier Serra and Dr. Frederic Font, Music Technology Group  
◦ Improved audio retrieval in the context of freesound.org through morphological description of audio content and topic modeling of metadata (<https://zenodo.org/record/3733039>)
- 2010–14 **Bachelor of Technology (hons.) in Electronics and Communication Eng.**, THE LNM INSTITUTE OF INFORMATION TECHNOLOGY, Jaipur, CGPA: 9.65/10, Class Position: **2/197**.  
**Thesis:** Exploring speech representation schemes: A manifold learning approach  
**Advisors:** Dr. Chng Eng Siong (NTU, Singapore) and Dr. Pratik Shah (IIIT-Vadodara)  
◦ Investigated various manifold learning algorithms and sparse representation paradigm for feature extraction and classification of vowels
- NORTH INDIAN CLASSICAL MUSIC, VOCAL**
- 2012 **Sangeet Bhushan**, PRACHEEN KALA KENDRA, Chandigarh, India.

## Honors and Achievements

- 2019 Awarded ISMIR 2019 community grant for delivering tutorial on Audiovisual Music Processing with Prof. Zhiyao Duan, Prof. Slim Essid and Bochen Li
- 2015 Awarded CIFRE Fellowship to conduct doctoral research within an industry-university collaboration in France
- 2012 Received letter of commendation for highest cumulative performance index, LNMIIT
- 2012 Interviewed by All India Radio in the program 'Shining Star' as a young classical vocalist (Broadcasted on 26/12/2012)

## Work Experience

- Feb 2020–Present **Postdoctoral Researcher in Machine Learning**, TELECOM PARIS, France.  
**Active Learning and Kernel Methods**  
**Advisor:** Prof. Florence d'Alché-Buc  
◦ Working on active learning and infinite task learning applications within the **Chair on Data Science & Artificial Intelligence**.
- Feb 2019–20 **Research Engineer**, THE A-SENSE AND TELECOM PARIS, France.  
**Audio Scene Analysis**  
**Team:** Prof. Slim Essid, Dr. Raphael Blouet, Dr. Francois Rigaud  
◦ Worked on real-time audio event detection for the **A-sense startup** (Details not provided due to non-disclosure agreement)
- October 2015 **Algorithm Engineering Intern**, DOUBAN INC., Beijing.  
**Music Recommendation**  
**Advisor:** Dr. Jason Zhao, Director of Algorithm and Douban FM Product Team  
◦ Proposed and implemented an algorithm to improve **Douban FM**, company's music recommendation system (Details not provided due to non-disclosure agreement)

- December 2013 **Carnegie Mellon University IPTSE Winter School**, Multimedia Proc. & Data Mining.  
[Content-Based Video Indexing and Retrieval Using Corr-LDA](#)  
**Advisors:** Dr. Bhiksha Raj and Dr. Rita Singh (Carnegie Mellon University, USA)  
◦ Designed a novel content-based video indexing and retrieval system using correspondence latent dirichlet allocation (Corr-LDA) framework (<http://arxiv.org/pdf/1602.08581v1.pdf>)
- May–August 2013 **EEE Research Attachment Programme**, NANYANG TECHNOLOGICAL UNIVERSITY, Singapore.  
[Polymer Based Thin Film Organic Photovoltaic Solar Cells](#)  
**Advisor:** Dr. Tang Xiaohong, School of Electrical and Electronic Engineering  
◦ Fabricated P3HT/PCBM organic solar cells  
◦ Acquired experimental skills in spin coating, thickness measurement & solar cell characterization  
◦ Simulated device models for bulk heterojunction organic solar cell
- May–July 2012 **Research Intern**, MICROSOFT RESEARCH LAB, India.  
[Quantifying People's Affinity Towards Pentatonic Scales](#)  
**Advisors:** Dr. Ranjita Bhagwan and Dr. Monojit Choudhury  
◦ Designed a web interface (survey) consisting of several experiments to gather data for understanding people's affinity and choice hierarchy for a chosen set of existing and theoretical pentatonic scales

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## Patents and Publications

Please visit my google scholar page ([link](#))

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## Skills

- Technical** Programming/Frameworks: Python, PyTorch, TensorFlow, Keras, MATLAB, C  
Course work in audio/image signal processing, machine learning, optimization, music perception. Attended machine learning (MLSS 2017) and computer vision (ICVSS 2016) summer schools.
- Music** Vocal: North Indian Classical Music | Instruments: Harmonium, Tabla
- Language** Full Professional Proficiency: English, Hindi | Elementary: French

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## Professional and Extracurricular Activities

- Reviewing** IEEE Transactions on Audio, Speech and Language Processing, EURASIP Journal on Audio, Speech, and Music Processing, 2017, 2018, ISMIR 2020
- Music** Joined music band at Technicolor as a vocalist, 2017–2018  
Selected to judge auditions for music performances at Rishi Valley School, 2009  
Performed in several vocal stage programs / Lead school singing assemblies, 2006–10
- Theatre** Participated in several English and Hindi plays  
Attended a 60-day theatre workshop by National School of Drama graduates

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## Selected Technical Talks

- May 2020 Audiovisual representation learning with applications to music performances  
Invited expert talk at ATAL-AI Faculty Development Program, IIIT Vadodara
- Jan 2020 Learning representations for robust AV scene analysis  
ENS, Lyon, France - Successful postdoc application in Dr. Remi Gribonval's group
- Nov 2019 Tutorial on Audio-visual Music Processing (with Prof. Z. Duan, Prof. S. Essid and B. Li)  
ISMIR 2019, TU Delft, Netherlands