



# Aarohi JOHAL

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"Contributing to the growth of an innovative project in a dynamic environment"

**Nationality:** Indian  
**Age:** 30 (born on 01/02/1987)  
**Civil Status:** Married  
Swiss work permit; type B  
Car driving licence

## COURSEWORK

### POST-GRADUATE

Intreprenurship (Doctoriales, Grenoble),  
Intellectual property and copyright (INPI)

### GRADUATE

Machine Learning  
Computer Vision  
Image and Signal Processing  
Computational Geometry  
Computer Graphics  
Robotics: Perception and Actuation  
Medical Imaging and Analysis  
Software Engineering Principles . . .

### UNDERGRADUATE

Engineering Mathematics  
Object-Oriented Programming  
Comp. Systems Analysis and Design  
Graphics and Applications  
Computer Networks  
Database Concepts and Design . . .

## CERTIFICATIONS

- Microsoft System / Network Administration (**MCSE, MCSA**)
- Microsoft Database Administration (**MCDBA**)

### PROGRAMMING

C/C++ • Python • HTML/CSS/JS •  
Java • Visual C#/Basic .NET • E-Lisp . . .

### LIBRARIES

Qt • OpenCV • OpenCASCADE •  
libCinder • OpenGL . . .

### SOFTWARE/PRODUCTIVITY

Salome • CATIA v5 • Solidworks  
L<sup>A</sup>T<sub>E</sub>X • MS Office • Inkscape • GIMP . . .

## LANGUAGES

- French (fluent) • English (native)
- Hindi (native) • Punjabi (native)

## EXPERIENCE

### • RESEARCH ENGINEER | EDF R&D LABS

October 2013 - December 2016 | Paris-Saclay, France

*Objective: The generation of construction processes computed from an imported CAD solid model, analyzing the B-Rep model of a CAD solid to derive the possible nontrivial construction processes for generating the final shape and the corresponding primitives organized into a graph.*

### SUPERVISION

- Aymeric SEURET - Intern 2nd yr. ENSIMAG | 2016  
*Implementation of local symmetry properties search on the boundary of a solid CAD model.*
- Galaad BENTROUDI - Intern 3rd yr. ENSIMAG | 2014  
*Implementation of supermaximal geometric elements in a BRep solid.*

### TEACHING

- École Polytech de Grenoble | Janvier 2014 - May 2014  
*Course on advanced algorithms for second year engineering school students.*

### • RESEARCH ENGINEER | INRIA RHÔNE-ALPES

February 2013 - September 2013 | Grenoble, France

*Objective: The conversion of a CAD model into a maximal boundary for its morphologic segmentation. Developpement of tools based on OpenCASCADE for visualisation and analysis of geometric and topological elements.*

## INTERNSHIPS

### • MASTER'S THESIS INTERNSHIP | JEAN-KUNTZMANN LABORATORY | WITH EDMOND BOYER

February 2012 - July 2012 | Grenoble, France

*Studying Motion Hulls: Used spectral methods to characterise and analyse motion information of a sequence of spacio-temporal data.*

### • RESEARCH INTERNSHIP | INFORMATICS LABORATORY OF GRENOBLE | WITH JOHNATHAN GRATTAGE

February 2011 - June 2011 | St-Martin d Hères, France

*Implemented the research work "A Quantum Game of Life" describing a 3D quantum cellular automata (QCA) capable of simulating all other 3D QCA.*

### • TRAINEE DEVELOPPER | HP EDUCATION SYSTEMS

Janvier 2009 - Juillet 2009 | Noida, India

*Implementation of a system of communication based on bluetooth communication in a hybrid topology based network using the Java platform.*

## EDUCATION

### • MASTER OF RESEARCH IN MATH. / COMPUTER SCIENCES

JOSEPH FOURIER UNIVERSITY

September 2010 - July 2012 | Grenoble, France

Specialising in Computer Graphics, Computer Vision and Robotics

### • ENGINEERING DEGREE (EQUIVALENT B.SC.)

PUNJAB TECHNICAL UNIVERSITY

September 2006 - July 2010 | Jalandhar, India

Specialising in Computer Sciences, and Applied Mathematics.