



## Md. Kamrul Hasan

### Electrical Engineer



07 March 1992



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## About me

Hi!! Let me wish you a warm welcome to read my Curriculum Vitae! I am an Erasmus Scholar on Medical Imaging and Applications [2017-2019]. My dream is to be an active researcher on Medical Imaging and Deep learning.

## Skills

Python

MATLAB

R

C and C++

Java

Ubuntu and Linux

Windows

Latex

Team Work

Social Activity

[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert)]

## Research Interests

Medical Imaging, Deep learning, DCNN and Transfer Learning for Medical Images, 3D Reconstruction of Medical Images, and Bio-mathematics.

## Education

- Since 2017 M.Sc. in Medical Imaging UdG (SPAIN), UNICAS (ITALY) and UB (FRANCE)  
*Medical Image Analysis and Applications (MAIA)*
- 2015-2017 M.Sc. in Electrical and Electronic Engineering KUET, Bangladesh  
Majoring in Signal Processing
- 2009-2014 B.Sc. in Electrical and Electronic Engineering KUET, Bangladesh  
Majoring in Electrical Engineering

## Awards and Scholarships

- 2018 University Gold Medalist for being Topper in B.Sc. Education.
- 2017-2019 Erasmus Mundus Scholarship.
- 2009-2014 Dean's award for excellency in B.Sc. Education (4 times).
- 2009-2014 Vocational Scholarship for excellency in B.Sc. Education (4 times).

## Projects and Researches

University of Girona (UdG), Spain. Coordinator: Dr. Arnau Oliver.

1. Non rigid 3D Lung CT registration.  
*Supervisor:* Dr. Robert Marti and Dr. Rafael Garcia Campos, UdG, Spain.
2. Skin Lesion Classifications Using Transfer Learning of DCNN.  
*Supervisor:* Dr. Arnau Oliver and Dr. Xavier Llado, UdG, Spain.
3. Automatic Hand Segmentation Using Active Shape Model (ASM).  
*Supervisor:* Dr. Arnau Oliver and Dr. Xavier Llado, UdG, Spain.
4. Intensity Based MRI Image Registration.  
*Supervisor:* Dr. Robert Marti and Dr. Rafael Garcia Campos, UdG, Spain.
5. Feature Based Image Registration Using RANSAC for Outlier Rejection.  
*Supervisor:* Dr. Robert Marti and Dr. Rafael Garcia Campos, UdG, Spain.
6. Atlas+Expectation Maximization (EM) Based Brain Tissue (CSF, GM and WM) Segmentation.  
*Supervisor:* Dr. Robert Marti and Dr. Xavier Llado, UdG, Spain.
7. Brain Tissue (CSF, GM and WM) Segmentation Using Transfer Learning (NeuroNet).  
*Supervisor:* Dr. Robert Marti and Dr. Xavier Llado, UdG, Spain.
8. Brain Tissue (CSF, GM and WM) Segmentation Using Expectation Maximization (EM) and Gaussian Mixture Model (GMM).  
*Supervisor:* Dr. Robert Marti and Dr. Xavier Llado, UdG, Spain.

UNICAS, Italy. Coordinator: Dr. Francesco Tortorella.

1. Automatic Mass Detection in Breast Using Deep Convolutional Neural Network and SVM Classifier.  
*Supervisor:* Prof. Dr. Francesco Tortorella, UNICAS, Cassino, Italy.
2. Automatic Mass Classification in Breast Using Transfer Learning of DCNN.  
*Supervisor:* Prof. Dr. Mario Molinara, UNICAS, Cassino, Italy.
3. Automatic Skin Lesion Segmentation Using Image Analysis.  
*Supervisor:* Dr. Alessandro Bria, UNICAS, Cassino, Italy.
4. Inverse Kinematic Controller to Emulate a Screwing Movement.  
*Supervisor:* Prof. Dr. Gianluca Antonelli, UNICAS, Cassino, Italy.
5. Automatic Skin Lesion Segmentation Using Transfer Learning Approaches of DCNN (U-Net, FCN8s, and FCN32s).

- University of Burgundy (UB), France. Coordinator: Dr. Desire Sidibe.
1. Face Recognition Using Principal Component Analysis.  
*Supervisor:* Prof. Dr. Desire Sidibe, University of Burgundy (UB), France.
  2. Quantification of Trabeculae Inside the Heart from MRI Using Fractal Analysis.  
*Supervisor:* Prof. Dr. Alain Lalande, University of Burgundy (UB), France.
  3. Implementation of Content Aware Image Resizing.  
*Supervisor:* Prof. Dr. Desire Sidibe, University of Burgundy (UB), France.
  4. 3D Scanner Implementation Using C++ and Kinect V2.  
*Supervisor:* Prof. Dr. Y. Fougerolle, University of Burgundy (UB), France.

#### Research Internship at EnCoV, Clermont-Ferrand, France.

*Supervisor:* Dr. Lilian Calvet and Prof. Dr. Adrien Bartoli

1. Laparoscopic Tool Segmentation for Automatic Pose Estimation Using Deep Convolution Neural Network.
2. Surgical Tool Segmentation Using Image Analysis.
3. Tool tracking for Interactive AR visualization.

### Experience

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|------------|---|------------|
| Since 2015 | Lecturer, Dept. of EEE, KUET, Khulna, Bangladesh  | [Teaching] |
|            | Teaching basic courses and laboratory related to Electrical and Electronic Engineering. |            |
| 2015-2015  | Lecturer, Dept. of EEE, DIU, Dhaka, Bangladesh  | [Teaching] |
|            | Teaching basic courses and laboratory related to Electrical and Electronic Engineering. |            |

### Publications

1. *Google Scholar:* [scholar.google.com/citations?user=36WXELIAAAAJ&hl=en](https://scholar.google.com/citations?user=36WXELIAAAAJ&hl=en)
2. *IEEE Papers:* [ieeexplore.ieee.org/search/searchresult.jsp?newsearch=true&queryText=md.%20kamrul%20hasan%20kuet](http://ieeexplore.ieee.org/search/searchresult.jsp?newsearch=true&queryText=md.%20kamrul%20hasan%20kuet)

### References

1. Prof. Xavier Llado, Ph.D.  
Department of Computer Technology and Architecture  
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Girona, Spain.  
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2. Prof. Arnau Oliver, Ph.D.  
Department of Computer Technology and Architecture  
University of Girona (UdG)  
Girona, Spain.  
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3. Prof. Dr. Desire Sidibe  
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University of Burgundy (uB)  
Le Creusot, France.  
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