

TAHIR HABIB NAWAZ

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CAREER OBJECTIVE

An enthusiastic and self-disciplined international Masters student with experience of studying across three European countries seeking an opportunity to work in a competitive environment with a passion for innovation and zeal to accomplish higher goals.

ACADEMIC QUALIFICATION

➤ [2007 to date] - **Erasmus Mundus European Masters in Computer Vision and Robotics Heriot-Watt University, UK; University of Girona, Spain; University of Burgundy, France.**

Percentage of Marks Obtained: 75.54% [Last semester (thesis) in progress]

Major courses:

Image processing (Filtering, image segmentation), Real-time image processing, Digital signal processing, Pattern recognition, Medical Imaging, Visual perception (camera calibration, stereo vision), C/C++ Programming, Industrial robotics (robot programming), Autonomous robots (control architectures, robot localization), Data mining and Machine learning.

Research Thesis (January 2009 – June 2009):

Dense 3D Reconstruction based upon Photometric Stereo using light source with arbitrary motion.

➤ [2001-2005] - **Bachelor of Mechatronics Engineering National University of Sciences & Technology (NUST), Pakistan.**

GPA: 3.75/4.00

Major courses:

Industrial management, Industrial automation, Industrial robotics, Industrial control, Industrial electronics, Control systems, Microcontrollers, PLCs, C/C++ Programming, Manufacturing processes, Electronics circuit design, Circuits analysis, Engineering economics, Communication skills.

Final Project:

Design, fabrication and control of three **Autonomous Robots** and a **Manual Robot** for the ABU (Asia-Pacific Broadcasting Union) ROBOCON Competition that was held in Beijing, China in August, 2005. The autonomous robots had to feed pre-loaded balls into 1.5 m high baskets (whose positions were known) by tracking lines onto green game field. The task of manual robot was to load the balls and then feed them into one foot high baskets.

➤ [1999 - 2001] **Higher Secondary School Certificate (HSSC) Islamabad Model College for Boys, Sector F-8/4, Islamabad, Pakistan.**

Marks Obtained: 851/1100 (Grade - A)

Major Courses: Physics, Chemistry, Mathematics.

➤ [1997 - 1999] **Secondary School Certificate (SSC) Islamabad Model College for Boys, Sector F-8/4, Islamabad, Pakistan.**

Marks Obtained: 666/850 (Grade - A)

Major Courses: Physics, Chemistry, Mathematics, Computer science

AWARDS AND ACHIEVEMENTS

- I have been awarded **Erasmus Mundus Scholarship** by European Commission for my ongoing Masters Studies. It is a prestigious European Masters program in the aforementioned three universities.
- I was the **Team Leader** of Pakistan in A.B.U. (Asia-Pacific Broadcasting Union) ROBOCON Competition (**an international robot contest**) that was held in Beijing, China in Aug., 2005.
- I was awarded **University Scholarship** on the basis of GPA in all the semesters during my undergraduate studies.
- I won **first prize** in Fire Fighting Robot Competition held at College of E&ME, Pakistan in 2003.
- I played cricket at **club level** and was selected in Islamabad Cricket Association (ICA) **Under-19 Cricket Team** in Pakistan. I also played football at **college level**.

OTHER MASTERS PROJECTS

- Structure from Motion using a calibrated camera.
- 3D Reconstruction of person's face using Photometric stereo with known light source.
- Stereo-based dense 3D Reconstruction of scenes.
- Hand tracking and finger counting in real-time.
- Segmentation of coloured and grey images using region growing method.
- Classification of objects from a number of visual object classes in realistic scenes (based on PASCAL Challenge 2006).
- Design and implementation of algorithms for the fulfillment of specified tasks (obstacle avoidance, robot position estimation) using **e-puck robot**.
- Simulation of a Painting Process with Mitsubishi RV-E4NM robot.
- Simple palletization task with the Mitsubishi RV-M2 robot.

OTHER BACHELORS PROJECTS

- Design of microcontroller compatible Digital to Analog Converter (DAC) card.
- Design of microcontroller compatible Analog to Digital Converter(ADC) card.
- Speed and Direction Control of a DC Motor using an H-Bridge circuitry.
- Design and fabrication of a Line Tracking Fire Extinguishing Robot for the All Pakistan Fire Fighting Robot contests held in 2003 and 2004.

ADDITIONAL SKILLS

➤ **Technical Skills:**

Programming languages: MATLAB, C, C++

Operating systems: Windows, Linux

Others: MS Word, MS Power Point, MS Excel

➤ **Interpersonal Skills:**

During my Masters course, I have lived and worked with the people belonging to diverse cultural backgrounds and different nationalities. I am quite capable to work well both in multi-cultural teams and at my own.

➤ **Language Skills:**

Punjabi/Urdu – Native Language, **English** – Fluent, **French** – Basic

➤ **Additional Information:**

During my free time, I like to play and watch cricket. I also play snooker sometimes. To keep myself fit, I take exercise in gym and go for swimming. I also like to travel and have had experience of travelling to some countries. Lastly, I also read newspaper to know about current affairs.

REFERENCES

- Dr. Fabrice Meriaudeau (University of Burgundy, France) Fabrice.Meriaudeau@u-bourgogne.fr, Tel. +33 (0)3 85 73 10 77
- Dr. David Fofi (University of Burgundy, France) David.Fofi@u-bourgogne.fr, Tel. +33385731126
- Dr. Yvan Petillot (Heriot-Watt University, Edinburgh, UK) Y.R.Petillot@hw.ac.uk, Tel. +44 (0) 131 451 8277