

Curriculum Vitae

Personal information

Name **Amitkumar Bhupendrakumar Shah**
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Nationality Indian
Date of birth 12th December 1986
Gender Male
Marital Status Married



Research experience

Dates September 2012 – On going
Position held Research Assistant, Technische Universität München
Project Description *Ph.D. Title:* Tracking and Navigation in Intra-operative Imaging
Synopsis: The intra-operative imaging is immensely useful to guide surgeon towards target which are not visible otherwise. Often these imaging devices are handheld or mounted on a robotic arm. Hence, it is very important to track these devices with reference to the patient anatomy and other surgical tools as well as for 3D image reconstruction. The accuracy of tracking and its effects on imaging have major impact on the image-guided interventions. The project aims to tackle such challenges faced during interventions and provide feasible clinical solutions.
Supervisor Prof. Dr. Nassir Navab
Dates July 2010 – August 2012
Position held Software Design, Texas Instruments Bangalore, India
Research activities Worked on software implementation of industrial communication protocols on TI processors
Supervisor Mr. Amit Chatterjee

Education and training

Dates July 2008 – June 2010
Title of qualification awarded Mast of Technology (M.Tech.) in Biomedical Engineering
Principal subjects Digital Signal Processing, Medical Imaging Physics, Wavelets, Clinical Physiology
University Indian Institute of Technology Bombay
Grade (CPI)# 9.53/10
#Cumulative Performance Index
Dates July 2004 – June 2008
Title of qualification awarded Bachelor in Engineering (B.E.) Biomedical Engineering
Principal subjects Signal Processing, Medical Imaging, Image Processing, Nuclear Medicine, Engineering Mathematics
University University of Mumbai
Grade 71.3%

Publications

1. W. Wein, A. Ladikos, B. Fuerst, A. Shah, K. Sharma, N. Navab (2013). Global Registration of Ultrasound to MRI using the LC2 Metric for Enabling Neurosurgical Guidance: Proceedings of 16th MICCAI, Nagoya, Japan.
2. A. Shah, P. Mithun, V. Gadre (2009). Image Registration under Translation Using A Multiresolution Hybrid Metric Approach, IET National Conference on Signal and Image Processing, Pune India.

Internships

- General Electric (GE) Global Research, J. F. Welch Technology Centre, Bangalore
Research Intern, Imaging Technologies Lab, May 2009 – July 2009
 - Created a dashboard for evaluation of non-rigid registration of PET images using python
 - Explored various similarity metrics and constraints on transformation for Ultrasound/CT Image Registration using ITK
- Meditronics Imaging Pvt. Ltd. (now Philips Healthcare), Mumbai
Intern, Service and Test Engineer, June 2007 - November 2007
 - Installed and serviced C-Arm Image Intensifier System in hospitals

Awards and honours

- **PicoSEC Marie Curie Fellowship** , September 2012 - August 2015
- **GE Foundation Scholarship**, July 2009 - June 2010

Teaching Assistance

- Project Management and Software Development for Medical Applications, TUM, SS2013
- Introduction to Biomedical Engineering, IIT Bombay, December 2010 – May 2010
- Virtual Instrumentation using LabWindows, IIT Bombay, July 2009 – November 2009

Mentorship of Master's students

- Burcu Altinkaya, "Mr Bone- Segmentation and Registration of Bone MRI" WS2013-14.
- Nicola Leucht, "Optical and Electromagnetic Hybrid Tracking" SS2013.

Membership

IEEE, IEEE EMBS, MICCAI

Languages

Mother tongues Gujarati, Marathi, Hindi

Other language(s)

Self-assessment

English*

German**

	Understanding		Speaking		Writing	
	Listening	Reading	Spoken interaction	Spoken production		
C1 Proficient User	C1 Proficient User	C1 Proficient User	C1 Proficient User	C1 Proficient User	C1 Proficient User	C1 Proficient User
A1 Basic User	A1 Basic User	A1 Basic User	A1 Basic User	A1 Basic User	A1 Basic User	A1 Basic User

(*TOEFL iBT score: 106/120; **Conducted by Sprachen Zentrum, TUM)

Technical skills and competences

- Programming: C, C++, Java, Python, Perl, Assembly
- Operating System: Microsoft Windows, Linux
- Tools: Matlab, ITK, LabWindows

Extra-Curricular Activities and Other Interests

- Organized PicoSEC & EndoTOFPET annual meeting and workshop, Munich, January 2013
- Department Placement Nomine, IIT Bombay Placement Cell, July 2009 – June 2010
Handled placement activities of over 1200 students in more than 300 companies
- Involved in the community development work
- Completed a basic French language course conducted in IIT Bombay
- Trained in the Indian Classical Music
- Passed the state level examinations in drawing
- Learnt 'Yoga Pranayam' from Ambika Yog Kutir, Mumbai

References

Dr. Nassir Navab

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Dr. Rohit Manchanda

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