Prabal Poudel, M.Sc

CONTACT INFORMATION

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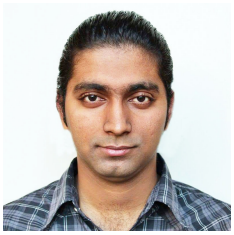


RESEARCH INTERESTS

Computer Vision, Image Processing and Machine Learning with applications in biomedical image analysis.

EDUCATION

Rhinische Friedrich-Wilhelms Universität Bonn, Bonn, Germany

M.Sc., Computer Science, October 2016

- Thesis Topic: *3D Segmentation of Thyroid Ultrasound Images using Active Contours*
- Advisors: Juergen Gall, Ph.D and Michael Friebe, Ph.D

Jacobs University, Bremen, Germany

B.Sc., Electrical Engineering and Computer Science, July 2003

- Thesis Topic: *Uncertainty in Electromagnetic Tracking: Estimation, Visualization and Correction*
- Advisors: Lars Linsen, Ph.D and Bojan Kocev, M. Sc.

Washington State Universty, Pullman, United States of America

Semester Abroad, Electrical Engineering and Computer Science, December 2013

- Specialization: *Computer Graphics, Artificial Intelligence, Networks and Protocals*

PROFESSIONAL EXPERIENCE

Otto-von-Guericke University, Magdeburg, Germany
Chair of Catheter Technologies and Image Guided Therapies

Ph.D. Researcher — January 2017 to present

Fraunhofer MEVIS, Bremen, Germany

Student Researcher — June 2013 to June 2014

Rhinische Friedrich-Wilhelms Universität Bonn, Bonn, Germany

Graduate Teaching Assistant, Computer Science — October 2015 to February 2015

Jacobs University, Bremen, Germany

Teaching Assistant, Electrical Engineering — February 2013 to August 2013

Center for Advanced Studies in Adaptive Systems, Pullman, USA

Lab Assistant — August 2013 to December 2003

Research Experience

Automatic Segmentation and Tissue Characterization of Thyroid Ultrasound Images for Volumetric Analysis January 2017 to present
Industrially funded project
Main Researcher
Department of Medical Engineering, Otto-von-Guericke-University of Magdeburg
Industrial partner: General Electric, USA

Automatic Calibration of Ultrasound Probes for Intracranial Navigation April 2017 to present
Industrially funded project
Main Researcher
Department of Medical Engineering, Otto-von-Guericke-University of Magdeburg
Industrial partner: Brainlab, Germany

Procedural Modeling of Buildings April 2015 to September 2015
University Lab Project
Co-investigator
Department of Computer Science, Rhinische Friedrich-Wilhelms Universität Bonn

Visual Attention and Saliency Detection February 2015 to September 2015
University Lab Project
Co-investigator
Department of Computer Science, Rhinische Friedrich-Wilhelms Universität Bonn

Real-time 3D Deformational Field Sampling in Breast Ultrasound Images June 2013 to August 2013
Industrial Project
Principal investigator
Fraunhofer MEVIS, Bremen, Germany

Virtual Implementation of Mars Rover February 2013 to June 2013
University Lab Project
Co-investigator
Faculty of Computer Science, Jacobs University, Bremen, Germany

Path Navigation in OpenStreetMap February 2013 to June 2013
University Lab Project
Co-investigator
Faculty of Computer Science, Jacobs University

Publications

M. Friebe, R. Odenbach, S. Balakrishnan, **P. Poudel**, H. Fritzsche, M. AlMatatoq, A. Illanes, J. Sanchez Lopez, J. Krug and A. Boese. Rethinking interventional MRI - is Ultrasound guidance the solution?. *In IGIC 2017 : 3. Image-Guided Interventions Conference, Abstractband*, Magdeburg, Germany, 2017.

P. Poudel, A. Illanes, C. Arens, C. Hansen and M. Friebe. Active contours extension and similarity indicators for improved 3D segmentation of thyroid ultrasound images. *Proc. SPIE 10138, Medical Imaging 2017: Imaging Informatics for Healthcare, Research, and Applications*, Vol. 1013803, 2017 (doi:**10.1117/12.2254029**).

P. Poudel, A. Bhise, A. Illanes, D. Sheet and M. Friebe. Automatic determination of the two largest axes from the largest slice of thyroid in a 2D Ultrasound Dataset. *Conference of the international Society for Medical Innovation and Technology*, Torino, 2017.

T. Wunderling, B. Gollaa, **P. Poudel**, C. Arens, M. Friebe and C. Hansen. Comparison of thyroid segmentation techniques for 3D ultrasound. *SPIE Medical Imaging*, Orlando, Florida, USA, February 2017 (doi:**10.1117/12.2254234**).

S. Balakrishnan **P. Poudel**, B. Menze, and M. Friebe. Intra-operative fusion of MRI and Ultrasound using optical inside-out tracking of multiple virtual markers for thyroid interventions. *Book of abstracts 51st annual conference of the German Society for Biomedical Engineering*, Dresden, Germany, September 2017.

P. Poudel, A. Illanes and M. Friebe and . Ultrasound thyroid texture classification using a simple texture pattern characterization. *Book of abstracts 51st annual conference of the German Society for Biomedical Engineering*, Dresden, Germany, September 2017.

P. Poudel. Challenges and prospects of Medical imaging and healthcare in Nepal in next decades. *Biomedical Engineering - Innovation, Design and Entrepreneurship Alliance*, pag. 113-114, Magdeburg, Germany, 2017

P. Poudel, C. Hansen, J. Spring and M. Friebe. 3D Segmentation of Thyroid Ultrasound Images Using Active Contours. *Current Directions in Biomedical Engineering*, Vol. 2, Issue 1, pag. 467-470, Delft, 2016 (doi:**http://dx.doi.org/10.1515/cdbme-2016-0103**).

P. Poudel, C. Hansen, J. Spring and M. Friebe. 3D Segmentation of Thyroid Ultrasound Images Using Active Contours. *In Proc IEEE Eng Med Biol Soc*, Orlando, USA, February 2016.

Skills and expertise

Programming languages:
C++, Matlab, JAVA, C, R, C#, Ruby
Image Processing Libraries:
OpenCV, ITK, Imfusion, MeVisLab, 3D Slicer
PC Knowledge:
Windows, Linux (Ubuntu), ROS, Adobe Photosoph and HTML.
Others:
RefWorks, WordPress, Drupal, Backend Development of websites.

Workshops and conferences

- Runner Up, Jacobs University Hackathon - Designed an online buying selling platform using HTML/CSS, PHP and mySQL, May 2014, Bremen, Germany.
- Second Annual Hackathon, Washington State University - Designed an online exam platform using C# and mySQL November, 2013, Pullman, USA.
- Google Developers Annual Meeting, Bremen, Germany, 2012.
- Presentation at IEEE EMBS Conference, August 2016, Orlando, Florida, USA.
- Presentation at SPIE Medical Imaging Conference, February 2017, Orlando, Florida, USA.
- Presentation and Winner of 10 Best Posters at Biomedical Engineering - Innovation, Design and Entrepreneurship Alliance, June 2017, Magdeburg, Germany.

Languages

Nepali: Native
English: Advanced
Hindi: Advanced
German: Basic

Scholarships and Awards

- Merit Based Scholarship for B.Sc. in Electrical Engineering and Computer Science, 2014.
- Mahatma Ghandhi Scholarship Award - 2009 and 2010 provided by Indian Embassy
- Academic Excellence Award - 2008 by Synergy FM, Bharatpur, Nepal for securing first position in School Leaving Certificate examination.
- Lions Club Student Award - 2008.

References

Prof. Dr. Michael Friebe
Chair of the Image Guided Surgery and Catheter Technologies
Otto-von-Guericke University, Magdeburg, Germany
michael.friebe@ovgu.de

Dr. Alfredo Illanes
Senior Researcher at the Image Guided Surgery and Catheter Technologies
Otto-von-Guericke University, Magdeburg, Germany
alfredo.illanes@ovgu.de

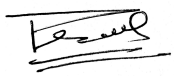
Prof. Dr. Lars Linsen
Professor at Computational Science and Computer Science
Jacobs University, Bremen, Germany
l.linsen@jacobs-university.de

Bojan Kocev, M.Sc.
Researcher at Department of Computer Science
Fraunhofer MEVIS, Bremen, Germany
bkocev@uni-bremen.de

Prof. Dr. Juergen Gall
Professor at Department of Computer Science
Rhienische Friedrich-Wilhelms Universität, Bonn, Germany
gall@iai.uni-bonn.de

Declaration

I, the undersigned, uphold that all aforesaid information regarding me is factual, inclusive and proper to the best of my comprehension and confidence. I consent that even a single fake explanation, subject to proof, will provide grounds for the erasure of the engagement if any is accredited.



Prabal Poudel November 17, 2017