

# Dr. Zobia SUHAIL

## PERSONAL DATA

---

PLACE AND DATE OF BIRTH: Lahore, Pakistan | 28 March 1981  
OTHER NAME: Zobia Suhail  
ADDRESS: 387-C, Green City Housing Scheme, Barki Road, Lahore.  
PHONE: +923224430012  
EMAIL: [zobia.suhail@pucit.edu.pk](mailto:zobia.suhail@pucit.edu.pk)  
RESEARCH PROFILE: [https://www.researchgate.net/profile/Zobia\\_Suhail/publications](https://www.researchgate.net/profile/Zobia_Suhail/publications)

## WORK EXPERIENCE

---

2014 - Current	<i>University of the Punjab (PUCIT) Pakistan, Lahore</i> Currently working as Assistant Professor
OCT 2017 - DEC 2017	<i>Department of Computer Science, Aberystwyth University, Wales, U.K</i> Worked on project CAD: Prostate Cancer Imaging in T2W MRI.
OCT 2016 - AUG 2017	<i>Department of Computer Science, Aberystwyth University, Wales, U.K</i> Served as Senior Demonstrator for the subject DataStructure & Algorithms.
FROM 2011 - 2014	<i>University of the Punjab (PUCIT) Pakistan, Lahore</i> Served as Lecturer for Computer Science subjects (DataStructures, DataBases, operating System...) to MSc and BSc.
2009 - 2011	<i>PUCIT, University of the Punjab, Lahore, Pakistan</i> Worked as Software Engineer and also as a team member of web development for developing website of the institution.
2004 - 2006	<i>Islamia Cantt College for Women Cantt, Lahore, Pakistan</i> Worked as lecturer to teach computer science subjects for ICS, BSC classes.
2002 - 2004	<i>Sui Northern gas Pipeline Limited, Lahore, Pakistan</i> Worked as Assistant Programmer and was involved in developing some internal software modules for the IT department of SNGPL.

## EDUCATION

---

2001	Bachelor of Sciences in COMPUTER SCIENCE, <b>Allama Iqbal Open University</b> , Pakistan Final Project: "Webiste for Internet Service Provider (ISP)" OBTAINED MARKS / TOTAL MARKS: 1709 /2300
2009	Master of Science in COMPUTER SCINCE, <b>PUCIT</b> , University of the Punjab, Pakistan Final Project: "MIS System" CGPA: 3.92
2013	Master of Philosophy in COMPUTER SCINCE, <b>PUCIT</b> , University of the Punjab, Pakistan Thesis: "Automatic Detection of abnormalities in mammograms" CGPA: 3.94
2019	Doctor of Philosophy in COMPUTER SCINCE, <b>Aberystwyth University</b> , Wales, U.K Thesis: "Detection & Classification of Mammographic Abnormalities" SUPERVISOR: Prof. Reyer Zwiggelaar, Aberystwyth University STATUS: Completed in 2019.

## SCHOLARSHIPS AND CERTIFICATES

---

- Computer Science Department Overseas Scholarship (CSDOPS) (2015), Aberystwyth University, Wales, U.K.
- Overseas Scholarship and Travel Grant for pursuing PhD (2015), University of the Punjab, Lahore
- Gold Medalist, M.Sc(CS) (session 2007–2009), PUCIT, University of the Punjab, Lahore
- M.Sc Merit Scholarship (session 2007–2009), PUCIT, University of the Punjab, Lahore
- First position in PhD final year presentation, (2017), Aberystwyth University, Wales, U.K.

## RESEARCH GRANTS

---

- Research Grant: Funding: USD 1500, University of the Punjab, Lahore, Pakistan for fiscal year: 2011–12

## LANGUAGES

---

URDU: Mothertongue  
ENGLISH: Fluent  
ARABIC: Basic Knowledge

## COMPUTER SKILLS

---

Basic Knowledge: PHP, ASP, JSP, mysql, HTML, Access  
Intermediate Knowledge: VB, Excel, PowerPoint, GIMP, Adobe Photoshop, Flash  
Programming Languages : COBOL, Pascal, Fortran, Java, Python, Matlab  
Operating System: WINDOWS, DOS  
Documentation :  $\LaTeX$ , Word

## RESEARCH EXPERIENCE

---

- 2011 - 2012: Have worked on detecting several abnormalities in mammograms with collaboration of radiologist in INMOL hospital, Pakistan. Outcome of this work was journal publication.
- 2016 - 2019 : As a Postgraduate research student in Computer Science Department of Aberystwyth University, i did my research work in mammographic image analysis under supervision of Prof. Reyer Zwigelaar (Aberystwyth University), where i used following datasets.  
Mammographic patches - DDSM database  
Segmented micro-calcification - DDSM database  
For the segmented micro-calcification, i worked on the classification of benign and malignant micro-calcification. Whereas for mammographic patches we are working for the segmentation of masses in mammograms as well as the classification of benign and malignant masses. The outcome of this work is a journal and a conference publication.
- October 2017 - December 2017: Worked on project " CAD: Prostate Cancer Imaging in T2W MRI." with Prof. Reyer Zwigelaar. The basic focus was to develop technique for gleason score classification for prostate cancer in T2 weighted MRI (T2w-MRI) images. The dataset was annotated by expert radiologist from Norwich University Hospital, U.K. During that work techniques have been developed for 2-class and 3-class gleason score classification

## PUBLICATIONS

---

- **Suhail, Z.**, Sarwar, M., Murtaza, K. (2015). Automatic detection of abnormalities in mammograms. *BMC medical imaging*, 15(1), 53.
- **Suhail, Z.**, Denton, E. R., Zwiggelaaar, R. (2017). Tree-based modelling for the classification of mammographic benign and malignant micro-calcification clusters. *Multimedia Tools and Applications*, 1-14.
- **Suhail, Z.**, Mahmood, A., Wang, L., Malcolm, P. N., Zwiggelaaar, R. (2018, July). A Voting-Based Encoding Technique for the Classification of Gleason Score for Prostate Cancers. In *Annual Conference on Medical Image Understanding and Analysis* (pp. 74-83). Springer, Cham.
- **Suhail, Z.**, Hamidinekoo, A., Zwiggelaaar, R. (2018). Mammographic mass classification using filter response patches. *IET Computer Vision*, 12(8), 1060-1066.
- **Suhail, Z.**, Hamidinekoo, A., Denton, E. R., Zwiggelaaar, R. (2017, July). A Texton-Based Approach for the Classification of Benign and Malignant Masses in Mammograms. In *Annual Conference on Medical Image Understanding and Analysis* (pp. 355-364). Springer, Cham.
- Hamidinekoo, A., **Suhail, Z.**, Qaiser, T., Zwiggelaaar, R. (2017, July). Investigating the Effect of Various Augmentations on the Input Data Fed to a Convolutional Neural Network for the Task of Mammographic Mass Classification. In *Annual Conference on Medical Image Understanding and Analysis* (pp. 398-409). Springer, Cham.
- **Suhail, Z.**, Denton, E.R. and Zwiggelaaar, R., 2018. Classification of micro-calcification in mammograms using scalable linear Fisher discriminant analysis. *Medical & biological engineering computing*, pp.1-11.
- **Suhail, Z.**, Zwiggelaaar, R. et al., Multi-scale morphological feature extraction for the classification of micro-calcifications, 14th International Workshop on Breast Imaging (IWBI), 2018, Presentation due in July 2018.
- **Suhail, Z.**, Zwiggelaaar, R. et al., Bag of visual words based approach for the classification of benign and malignant mass in mammograms using voting-based features encoding , 14th International Workshop on Breast Imaging (IWBI), 2018, Presentation due in July 2018.
- Hamidinekoo, A., **Suhail, Z.**, Denton, E., Zwiggelaaar, R. (2018, July). Comparing the performance of various deep networks for binary classification of breast tumours. In *14th International Workshop on Breast Imaging (IWBI 2018)* (Vol. 10718, p. 1071807). International Society for Optics and Photonics.
- Hamidinekoo, A., Dagdia, Z. C., **Suhail, Z.**, Zwiggelaaar, R. (2018, December). Distributed Rough Set Based Feature Selection Approach to Analyse Deep and Hand-crafted Features for Mammography Mass Classification. In *2018 IEEE International Conference on Big Data (Big Data)* (pp. 2423-2432). IEEE.

## INTERESTS AND ACTIVITIES

---

Technology, Programming  
Web Development, Medical Image Processing, Machine Learning  
Badminton, Travelling, watching current affair programs

## REFERENCES

---

- **Reference 1:**  
Prof. Reyer Zwiggelaar [Head of the Graduate School,  
Director of Research (IMPACS)] (PhD Supervisor)  
Aberystwyth University,  
Aberystwyth, Wales, U.K  
Phone no: +44 (0)1970 628691  
email: rrz@aber.ac.uk
- **Reference 3:**  
Christine Zarges [Lecturer]  
Aberystwyth University, Aberystwyth, Wales, U.K  
Phone no: +44 (0)1970 622452  
email: chz8@aber.ac.uk
- **Reference 2:**  
Neil Mac Parthaláin [Research Fellow]  
Aberystwyth University, Aberystwyth, Wales, U.K  
Phone no: +44 (0)1970 622869  
email: ncm@aber.ac.uk