

<b>PRESENT ADDRESS</b>	1 Ludgate Hill Wotton-under-Edge Gloucestershire, UK GL12 7JJ	TEL: ++44 (0) 777406400 FAX: ++44 (0) 117 954 5206 EMAIL: paul.hill@bristol.ac.uk Nationality: British
<b>RESEARCH AREAS</b>	Image Processing, Machine Learning, Signal Processing, Data Science	
<b>PRESENT POST</b>	<b>Research Fellow. Image Processing-Machine Learning</b>	
<b>EDUCATION</b>	University of Bristol, UK, PhD: Electrical and Electronic Engineering, June 2002. University of Bristol, UK, MSc: Department of Computer Science (Distinction) 1997. Bath Spa University, UK, MA: Creative Music Technology, (Distinction) 2006. Open University, UK, BSc: (Hons) Department of Computer Science 1 <sup>st</sup> , 1995.	
<b>HIGHLIGHTS</b>	51 journal and conference publications: image processing, remote sensing, inverse problems and machine learning in the context of remote sensing and image processing Lecturer and unit organizer of masters speech and audio technology course Experienced senior researcher with two years industrial experience and over 15 years postdoc experience, specializing in signal processing and machine learning techniques Industrial and academic management experience Experienced supervisor of masters and undergraduate students Recently published book "Audio Signal Processing using MATLAB" published by CRC press / Taylor and Francis January 2019	

**RESEARCH EXPERIENCE**

Col: £470,487 won, PI: £390,482 won.

**Contracted Research 2002-Current:**

PI on Context adaptive ATR with Seebyte

PI on Scalable Fusion Architectures: DSTL

Co-I on Underwater Assured Detection and Classification: Atlas Elektronik

Co-I on Perceptual Denoising: EPSRC

Co-I on ITP Domain Optimised Compression Phase: DSTL

Co-I on A Unified Framework for Scalable Video Super-Resolution and Fusion: DSTL

Co-I on MBDA-Image Compression using JPEG200: MBDA

Co-I on RFEL Image Fusion Study

**Contracts Currently Working On:**

DASA Vision 2020: Learning-optimal Deep Visual Compression: Developing novel compressed domain deep learning architectures

Creative Industries Clusters Programme: Creating visual models of audience immersion

## ORGANISATION MEMBERSHIP

- Member of the IEEE Signal Processing and IEEE Communication Societies
- Member of the International Program Committee (IPC) for the IASTED International Conference on Signal Processing, Pattern Recognition and Applications

## PATENT APPLICATIONS

- GB 050035.5: Interpolation Free Sub-Pixel Accuracy Motion Compensation

## PUBLICATIONS (TOTAL - 51; H-index 18; i10-index 21).

- Hill, P.R.**, Kumar, A., Temimi, M., & Bull, D. R. "HABNet: Machine Learning, Remote Sensing Based Detection". arXiv preprint arXiv:1912.02305.
- Anantrasirichai N., Biggs J., Albino F., **Hill P.** and Bull, D. R., "Application of machine learning to classification of volcanic deformation in routinely generated InSAR data." Journal of Geophysical Research: Solid Earth, 123, 2018, pp. 6592-6606.
- Anantrasirichai N, Albino F, **Hill P.** , Bull D and Biggs J., "Detecting Volcano Deformation in InSAR using Deep learning." arXiv preprint arXiv:1803.00380. 2018.
- Hill P.**, Al-Mualla M.E. and Bull D., "Perceptual Image Fusion using Wavelets", IEEE Transactions on Image Processing, Volume 26, 2017, pp. 1076-1088.
- Jonghoon. K., **Hill P.** , Canagarajah, N., Achim, A. "Approximate Message Passing Reconstruction of Quantitative Acoustic Microscopy Images", IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017 July
- Hill P.R.** , Achim A.M., Al-Mualla M.E. and Bull D., "Contrast Sensitivity of the Wavelet, Dual Tree Complex Wavelet, Curvelet and Steerable Pyramid Transforms", IEEE Transactions on Image Processing, Volume 25, 2016, pp. 2739-2751.
- Basaeed E., Bhaskar H., **Hill P.** , Al-Mualla M. and Bull D., "A supervised hierarchical segmentation of remote sensing images using a committee of multi-scale convolutional neural networks", International Journal of Remote Sensing, Volume 37, Number 7, 2016, pp. 1671-1691.
- Hill P.R.**, Bhaskar H., Al-Mualla M.E. and Bull D.R., "Improved illumination invariant homomorphic filtering using the dual tree complex wavelet transform", ICASSP, 2016, pp. 1214-1218.
- Hill P.R.**, Anantrasirichai N., Achim A., Al-Mualla M.E. and Bull D.R., "Undecimated Dual-Tree Complex Wavelet Transforms", Signal Processing (Elsevier), Volume 35, 2015, pp. 61-70.
- Hill P.R.**, Achim A.M., Bull D.R. and Al-Mualla M.E., "Dual-tree Complex Wavelet Coefficient Magnitude Modelling using the bivariate Cauchy-Rayleigh Distribution for Image Denoising", Signal Processing, 2014, pp. 464-472.
- Hill P.R.**, Achim A.M., Bull D.R. and Al-Mualla M.E., "Image denoising using dual tree statistical models for complex wavelet transform coefficient magnitudes", ICIP, 2013, pp. 88-92.
- Hill P.R.**, Achim A. and Bull, D.R., "Scalable video fusion", ICIP, 2013, pp. 1277-1281.
- Łoza A., Bull D.R., **Hill P.R.** and Achim A.M., "Automatic contrast enhancement of low-light images based on local statistics of wavelet coefficients", Digital Signal Processing (Elsevier), Volume 23, 2013, pp. 1856-1866.
- Hill P.R.** and Bull D.R., "Sub-pixel Motion Estimation using Kernel Methods", Signal Processing: Image Communication (Elsevier), Volume 25, Issue 4, 2010, pp. 268-275.
- Hill P.R.** , Chiew T.K., Bull D.R. and Canagarajah C.N., "Interpolation Free Subpixel Accuracy Motion Compensation", IEEE Transactions on Circuits and Systems, Volume 16, Issue 12, 2006, pp. 1519-1526.
- Hill P.R.** , Canagarajah N. and Bull D., "Image Segmentation Using a Texture Based Watershed Transform", IEEE Transactions on Image Processing, Volume 12, Issue 12, 2003, pp. 1618-1633.
- Hill P.R.**, Nikolov S., Canagarajah N. and Bull D., "Wavelets for Image Fusion", Wavelets in Signal and Image Analysis, from Theory to Practice, Ed. A. Petrosian and F. Meyer, Kluwer Academic Publishers, 2001, pp. 213-244.