

# Dr. Uche A. Nnolim

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## Area of specialization:

Electronic & Computer Engineering

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## EDUCATION & QUALIFICATIONS

### University of Kent, Canterbury, Kent, UK

- *PhD – Electronics Engineering* Sept 2006 – July 2010  
Thesis title: “FPGA architectures for logarithmic colour image processing”
- *MSc by Research - Electronics Engineering* Sept 2005 – Sept 2006  
Thesis title: “VHDL Implementation of Generalized Convergent Network (GCN) using FPGAs”

### University of Minnesota-Twin Cities, (UMN-TC), Minneapolis, MN, USA

- *BEE - Bachelor of Electrical/Electronic Engineering* Jan 1999 – May 2003
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## EMPLOYMENT

### Department of Electronic Engineering, Faculty of Engineering, University of Nigeria, Nsukka, Nigeria

*Lecturer* July 2013 – present

- Taught several undergraduate and postgraduate courses in electronic engineering.
- Supervising several undergraduate electronic engineering student projects.
- Performing assigned administrative and committee-based duties.

### Electronics Development Institute (ELDI), Abba town, Anambra State, Nigeria

*National Youth Service Corps Assignment* Aug 2011 – May 2012

- Successfully designed and implemented a Biometric Attendance Register system using C# and VB.NET programming languages and SecuGen biometric fingerprint reader.
- Initiated research geared towards Pure Sine Wave and Transformer-less Inverters in an effort to reduce the size and weight and increase the efficiency of the ones currently produced locally at ELDI.
- Reviewed papers for publication (by invitation) and also provided advice on research topics relevant to my field proposed by Research and Development (R & D) departments.
- Researched text and speech-based software translators for Igbo, Hausa and Yoruba languages to and from English.
- Investigated low-cost implementations of alternative energy sources such as wind and solar energy systems.
- Taught and advised I.T. students on relevant theory and topics related to projects.

### **University of Kent, Canterbury, UK**

#### ***Postgraduate Demonstrator/Teacher***

Sept 2005 – Sept 2009

- Taught courses in Engineering and Computer Science.

### **PUBLICATIONS**

- Nnolim, U. A., *Log hybrid architecture for tonal correction combined with modified unsharp masking filter algorithm for colour image enhancement*, INTEGRATION, the VLSI journal, vol. 48, pp. 221-229, 2015.
- Nnolim, U. A., *A Fuzzy Homomorphic Algorithm For Image Enhancement*, NIJOTECH, vol. 34, No. 1, pp. 156-163, January 2015.
- Nnolim, U. A., *Implementation of Spatial Domain Homomorphic Filtering on Embedded Mobile Devices*, NIJOTECH, vol. 34, No. 2, April 2015.

- Nnolim, U. A., *Design and implementation of novel, fast, pipelined HSI2RGB and log-hybrid RGB2HSI colour converter architectures for image enhancement*, Journal of Microprocessors and Microsystems, vol. 39, pp. 223-236, 2015.
- Nnolim, U.A., Khola, S., Howells, W.G. and Maier, K. D. (2006), *A VHDL based Implementation of Generalized Convergent Network using Field Programmable Gate Array*. **International Conference on Recent Advances in Soft Computing-RASC2006, Canterbury, Kent, June 2006.**
- Nnolim, U.A., Lee, P. (2008), *Homomorphic filtering of colour images using a spatial filter kernel in the HSI colour space*. **IEEE International Instrumentation and Measurement Technology Conference I2MTC 2008, Victoria, Vancouver Island, Canada, May 12–15, 2008.**
- Nnolim, U.A., Lee, P. (2008), *A REVIEW AND EVALUATION OF IMAGE CONTRAST ENHANCEMENT ALGORITHMS BASED ON STATISTICAL MEASURES*. **The 10th IASTED International Conference on Signal and Image Processing, SIP 2008, Kailua-Kona, USA, August 18 – 20, 2008.**
- U. Nnolim, *VHDL Implementation of Generalized Convergent Network using Field Programmable Gate Array*, M.Sc. thesis, **University of Kent at Canterbury, Canterbury-Kent, 2009.**
- U. Nnolim, *FPGA Architectures for Logarithmic Colour Image Processing*, Ph.D. thesis, **University of Kent at Canterbury, Canterbury-Kent, 2009.**