

## ISLI Eng Doctorate Innovative Analog IC (Integrated Circuit) Design and Test

ATEEDA provides analog test solutions for analog and mixed signal ICs. Based in the heart of Scotland's beautiful capital city of Edinburgh, UK, during your Engineering Doctorate, you will have the opportunity to work closely with our customers on one or more analog IC projects for automotive, consumer and other markets in Europe, Asia and Worldwide.

ATEEDA specializes in testing analog circuitry using digital test vectors. It has patented IP which uses artificial intelligence techniques coupled with an intimate understanding of the analog designs to produce extremely rapid and effective tests capable of deployment onto *digital* ATE. The trend of the last 30 years has been to push as much functionality in circuits from the analog, into the digital domain as possible. ATEEDA's philosophy is a natural extension of this approach into the field of testing of analog circuits.

Initially you will be exposed to a case study dealing with IC design and test teams in one of our integrated device manufacturer (IDM) customers. This will provide familiarity with deploying OptimATE's unique artificial intelligence approach to generating a test program for an analog IP block. Subsequently your objective would be to identify novel extensions and enhancements to the field of digital testing of analog circuits. ATEEDA will take a flexible approach according to the skills, capabilities and preferences of the student. Research topics that can form all or part of the research element of the Eng D include:

**Feature enhancements** such as: exploring new ways of mapping between individual analog circuit IC component's deviations and the circuit's functional specification;

**Associated novel extensions** such as: statistical or other ways of assessing noise performance and other key characteristics of analog IC devices undergoing manufacturing test.

This work will be done in the context of real-world IP designs from multinational semiconductor companies providing immediate relevant IC design experience.

## **Candidate profile**

Preferably, the candidate will have a good Honours or Masters degree in an electronics related area (possibly Physics with an electronics slant) and if possible some industrial experience in electronics / semiconductor manufacturing, test or design. A good grasp of mathematics and a facility with abstract concepts will help with the signal processing component of the work.

It is advantageous, but not essential, if the candidate already had knowledge and understanding of Analog IC design (especially CMOS) using industry standard IC simulation and EDA tools (such as HSpice©, HSIM© Spectre©, Eldo© etc), but training and teaching will form part of the Eng D program.

Support and training is available to complement the high levels of initiative, and solution-seeking approach the candidate will bring. ATEEDA is a fast growing small company and personable candidates will readily fit into the friendly and welcoming environment.

This Eng D offers the chance to grow with the company while making a contribution to the success of the business. If you are interested in becoming an integral member of the team in an exciting young semiconductor company with a range of blue-chip clients worldwide, please send your CV to:

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Or contact Sian Williams  
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+44 (0) 1506 469 312 to discuss further