



School of Computing, Engineering, and the Built Environment Edinburgh Napier University

PHD STUDENT PROJECT

Funding and application details

Funding status: Self funded students only

Application instructions:

Detailed instructions are available at <https://blogs.napier.ac.uk/scebe-research/available-phd-student-projects/>

Prospective candidates are encouraged to contact the Director of Studies (see details below) to discuss the project and their suitability for it.

Project details

Supervisory Team:

- DIRECTOR OF STUDY: Norman Harris (Email: N.Harris@napier.ac.uk)
- 2ND SUPERVISOR: Reza Salehiyan; Mark Dorris; Keng Goh; Savvas Popadopoulos

Subject Group: Engineering & mathematics

Research Areas: Engineering, Acoustic Engineering, Mechatronics, Marine Sciences, Music Technology, Audio media, Biotechnology.

Project Title: New Vibration Speaker Development

Project description:

The Gel Audio™ Loudspeaker Technology that I co-invented produced high quality sound over a surface through the hydrogel. It was also developed and incorporated into an audio product called the Woweeone. This product was designed to produce the bass sound on the surface it was attached to, and used a standard tweeter. The UPS of the the speaker technology was that it could produce quality sound even if hermetically sealed in an enclosure.

The project is to develop the technology so that it is sustainable and made of material that is completely recyclable. The method of producing the vibrations and the attachment to the material is not constrained to any specific design and could be developed for many applications, from underwater communications, bone conduction, medical to incorporated into fabrications for buildings or wall surround systems.

How the technology works on different materials and should be researched. Could the vibrations in the surroundings of the installations produced data / information through the technology, for example.

References:

Candidate characteristics

Education:

A first-class honours degree, or a distinction at master level, or equivalent achievements in Product Design Engineering, Mechatronics.

Subject knowledge:

- Materials.
- Design.
- Engineering plus electrical engineering skills.

Essential attributes:

- Good engineering knowledge.
- Enjoys developing prototypes, etc.

Desirable attributes:

- Innovative.
- Likes a challenge and pushes the boundary.