



The Bionic Ear Institute

POSITION DESCRIPTION

Bionic Vision Australia Project

POSITION TITLE:	Electronic Engineer (2 positions, one more experienced than the other)
TIME SCALE:	100%
DURATION:	Potential to extend to 2013
SALARY RANGE:	\$61,500 - \$89,000 (depending on qualifications and experience plus access to salary packaging)
SUPERANNUATION:	9% employer contribution

Organisational context

The Bionic Ear Institute is an eminent research organisation involved in cutting edge R&D to implement or improve medical bionics devices for the treatment of otherwise intractable conditions including deafness, blindness and epilepsy.

Project Summary

The aim of the Bionic Eye project is to develop an electronic implant capable of restoring basic vision to people suffering from degenerative retinal conditions. This visual prosthesis (Bionic Eye) will consist of an array of electrodes implanted behind the retina to stimulate the optic nerve cells in the eye, acting as a substitute for the photoreceptors that have degenerated or been badly damaged and no longer function effectively.

Position Summary

The incumbents will be part of a team responsible for design and construction of a prototype electrical stimulator for connection to a retinal implant (bionic eye) in human patients and implementation of software for psychophysics research and customisation of the image processor for individual patients.

The Engineers will report to Prof Peter Blamey one of the Chief Investigators on the Bionic Vision Australia project.

This position is funded by an ARC grant for the development and testing of a prototype bionic eye by 2013.

Responsibilities

The incumbents will also be required to collect, store and analyse technical and perceptual data from psychophysical experiments.

Additional responsibilities will include modification and maintenance of the devices being developed.

Personal skills and interests

Incumbents must have good interpersonal and written communication skills to interact directly with clinicians and blind patients, as well as with the rest of the research team.

An interest in bio-engineering, visual perception, objective measures of human performance and/or image processing would be an advantage.

Incumbents will be team players, who are comfortable working as part of a project involving neurophysiological measures on animal models to demonstrate the biological, medical safety and efficacy of experimental devices.

Minimum training level or qualifications

Essential

Post-doctoral qualifications or equivalent industry experience in Electronic Engineering.

Desirable

- Analog and digital hardware design and construction experience in a research environment.
- Software development experience in a research environment, including low-level programming to control directly custom-designed devices and high-level programming for use with blind human subjects.