



**UNSW**  
SYDNEY



## Bionic Eyes

**Pioneered the development of visual neuroprostheses (Bionic Eyes) in Australia. With half a dozen patents and several new disruptive neural interface technologies that make the device significantly more functional and novel than competitive technologies. A pre-clinical prototype has been developed.**

### Competitive advantage

- Multi-disciplinary team working at the interface of biology and engineering
- Extensive patent portfolio covering industrial and biomedical aspects of implantable bionics technology
- Design approaches and facilities that include Quality Management Systems following ISO13485 principles

### Impact

- A Bionic Eye is currently the only approach to provide vision restoration in diseases such as retinitis pigmentosa
- Currently millions of people worldwide have retinal degeneration that could be treated by a Bionic Eye

### Successful applications

- Preclinically tested prototype of 98-channel visual neuroprosthesis
- Neurostimulation microelectronics for stimulation and recording with wider uses in implantable and wearable devices

### Capabilities and facilities

- Biomedical microfabrication facility
- A range of electrophysiology, animal surgery, and microscopy setups for biological assessment of technology
- Access to engineers and infrastructure at the Australian National Fabrication Facility

### Our partners

- International collaborators in Asia, Europe and America

### More Information

Scientia Professor Nigel H. Lovell

Graduate School of Biomedical Engineering

T: +61 2 9385 3922

E: [n.lovell@unsw.edu.au](mailto:n.lovell@unsw.edu.au)

UNSW Knowledge Exchange

[knowledge.exchange@unsw.edu.au](mailto:knowledge.exchange@unsw.edu.au)

[www.capabilities.unsw.edu.au](http://www.capabilities.unsw.edu.au)

+61 (2) 9385 5008