

# Introduction to Neurofeedback

Brain, Mind & Memory Centre, 36 Beryl St., Tweed Heads  
9am-5pm, Friday 2<sup>nd</sup> June 2017



A wide range of studies in applied neuroscience have demonstrated the clinical effects of neurofeedback therapy (NFT) for enhancing brain activity and subsequently, improving daily functioning and outcomes for health and well-being. NFT is emerging as an effective adjunct to traditional methods used in therapy in clinical contexts and for performance enhancement.

This **Introduction to Neurofeedback** workshop is a continuing professional development opportunity for health care professionals from a range of fields including, but not limited to, psychology, nursing, physiotherapy, dentistry, osteopathy, occupational therapy, chiropractic, social work, speech pathology or medicine. Students and others with an interest in applied neuroscience may also participate in the workshop<sup>#</sup>.

*<sup>#</sup>When treating a medical or psychological disorder, one must carry a state issued license/credential in an approved health care field or if unlicensed, must work under appropriate supervision.*

## **Objectives of the 1-Day Workshop**

This workshop will overview the electrophysiological aspects of neurofeedback in the context of clinical psychological practice. As mental health practitioners, we are very focussed on psychological processes influencing daily functioning. Neurofeedback enables both client and practitioner to have greater insight and capacity to influence the physiological processes contributing to behaviour.

This workshop will introduce the concepts associated with EEG and qEEG-guided training, addressing behavioural symptoms and their neurophysiological attributes to provide:

- continuing professional development for all health practitioners, and
- an introduction to neurofeedback in the broad field of applied neuroscience.

## **About the Presenter**



**Michelle Aniftos** Clinical Psychologist and Neurotherapist in [private practice](#)  
*BSSc; PostGradDipEd; MEd; MPsyCh (Clinical); Grad Cert ClinNeuroPhys; BCN; QEEGD*

- Member - Australian Psychological Society & APS Clinical College
- Convener - [Neurofeedback & Psychology Interest Group](#)
- Accredited Supervisor for provisional and registered psychologists
- Fellow - [Applied Neuroscience Society of Australasia](#)
- Chair - [Biofeedback Certification International Alliance](#) - Australia
- BCIA Certified & Fellow - [Biofeedback Certification International Alliance](#)
- Diplomate of the [QEEG Certification Board](#)

## **About the Venue/Sponsor**

The **Brain, Mind & Memory Centre** was established, in 1992 as Solstice-Mind Matters, to meet the needs of families, individuals and couples who want to take ownership of their lives. The 'Centre is known locally and internationally for commitment to client care and to research-based **personalised** support to promote best outcomes for each individual. Clinical Director, Nerida Saunders, will work with Michelle Aniftos to demonstrate the power of neurofeedback in clinical case studies.

Register at <https://bmmi.wildapricot.org/event-2539046>

## Neurofeedback Certification

Toward BCIA-A Certification in Neurofeedback, candidates must: have pre-requisite tertiary studies in neuroanatomy and psychophysiology; successfully complete 36 hours of didactic education aligned with BCIA\* [Blueprint of Knowledge](#); and successfully complete the BCIA-A entry examination. The current 1-day workshop is accredited by BCIA to meet criteria for the following sections of the BCIA Blueprint of Knowledge curriculum:

|           |                                     |      |
|-----------|-------------------------------------|------|
| Section 1 | Orientation to Neurofeedback        | 4hrs |
| Section 4 | Research Evidence for Neurofeedback | 2hrs |

\*The Biofeedback Certification International Alliance (BCIA) was created in 1981 as the Biofeedback Certification Institute of America, with the primary mission to certify individuals who meet education and training standards in biofeedback and progressively re-certify those who advance their knowledge through continuing education. To reflect our global identity, we adopted this new name in March, 2010. BCIA is an autonomous non-profit corporation whose policies and procedures are set by an independent board of directors, comprised of a rotating group of distinguished clinicians, researchers, and educators. (see <http://www.bcia.org/i4a/pages/index.cfm?pageid=3431>)

Board certification is the mark of distinction for providers of biofeedback and neurofeedback services and establishes that the individual has met entry-level education and training requirements. However, BCIA certification is not a substitute for a valid license or other credential to legally practice one's profession as regulated by health care practices in your country. In 2010, the Applied Neuroscience Society of Australasia (ANSA) agreed to the development of an independent body whose role would be to develop and oversee standards for certification within Australasia. It was also agreed that this new organization would be affiliated with The Biofeedback Certification International Alliance. In 2011, Biofeedback Certification International Alliance – Australia Inc (BCIA-A) was first registered in Australia as an affiliate of the BCIA.

Neuroscience technology is advancing to provide new insights into the workings of the brain and powerful neurofeedback applications provide direct modulation of brain states. Practitioners need to maintain their professional knowledge and skills and also must consider the ethical considerations that arise with sophisticated methods to directly modulate and measure neuronal function. There are a range of university programs for applied neuroscientific studies. Very few universities are integrating the research on EEG and its biofeedback applications. Consider NFB-relevant training, e.g.:

<http://bio-medical.com/products/physiological-psychology-online-didactic-course.html>; | [www.behavmedfoundation.org](http://www.behavmedfoundation.org);  
<https://www.bsiwebinars.com/>; | <http://brownbackmason.com/nfb-professionals/manuals>

## Workshop Schedule

|              |  |                   |
|--------------|--|-------------------|
| 9 – 11       | Orientation to Neurofeedback <i>Part 1</i><br>- terminology, history & development<br>- assumptions underlying neurofeedback | 2hrs              |
| 11 – 11.15   | <i>Morning break</i>   |                   |
| 11.15 – 1.15 | Orientation to Neurofeedback <i>Part 2</i><br>- human learning theory & biofeedback  | 2hrs              |
| 1.15 – 2     | <i>Lunch</i>   |                   |
| 2 – 3.30     | Research Evidence for Neurofeedback <i>Part 1</i><br><i>Practical Demonstration SMR Biofeedback</i>                          | 1hr<br>30 minutes |
| 3.30 – 3.45  | <i>Afternoon break</i>   |                   |
| 3.45 – 5     | Research Evidence for Neurofeedback <i>Part 2</i><br><i>Course Evaluation</i>  | 1hr<br>15 minutes |
| 5-6          | Optional Q&A and further demonstration   | 1hr               |

## **Recommended Workshop Reading**

- [ISNR Guidelines for Neurofeedback](#) (2013)
- La Vaque, T. J., Hammond, D. C., Trudeau, D., Monastra, V., Perry, J., Lehrer, P., Matheson, D., & Sherman, R. (2002, December). [Template for developing guidelines for the evaluation of the clinical efficacy of psychophysiological evaluations](#). *Applied Psychophysiology and Biofeedback*, 27(4), 273-281.
- BCIA (2014). [Blueprint of Knowledge Statements for Board Certification in Neurofeedback](#)
- Biofeedback Certification International Alliance (2009). [Professional Standards and Ethical Principles of Biofeedback](#).
- Striefel, S. (2003). [Practice guidelines and standards for providers of biofeedback and applied psychophysiological services](#). Wheat Ridge, CO: AAPB.
- Yucha, C., & Gilbert, C. (2004). [Evidence-based practice in biofeedback and neurofeedback](#). Wheat Ridge, CO: AAPB.

## **Introduction to Neurofeedback – Workshop Overview**

### **Session One: Orientation to Neurofeedback Part 1**

Definition of Neurofeedback (EEG Biofeedback)

History and Development of Neurofeedback

1. Pioneers in EEG and NFB (Caton, Berger, Adrian, Kamiya, etc.)
2. Highlights of seminal studies (Serman 1968/2000, Lubar 1976, Birbaumer 1982 etc.)
3. Further developments: (Rosenfeld, Ayers, Budzynski, Peniston, Green, Kulkosky. etc.)

Assumptions underlying Neurofeedback:

1. Concepts of feedback and control in biological systems.
2. Basic psychophysiology of stress and attention

### **Session Two: Orientation to Neurofeedback Part 2**

Overview of principles of human learning as they apply to biofeedback

1. Learning theory (e.g. habituation, classical and operant conditioning, discrimination, shaping, generalization and extinction.)
2. Application of learning principles to NFB (e.g., generalization to the life situation, discrimination training, length and number of sessions, etc.)

### **Session Three: Research Evidence Part 1**

Interpretation of the methodological and statistical criteria and procedures for determining levels of efficacy and effectiveness of neurofeedback, as outlined in La Vaque et al., 2002.

Practical Demonstration of QEEG/Neurofeedback set-up

### **Session Four: Research Evidence for Neurofeedback Part 2**

Key research studies establishing current efficacy levels of major applications of Neurofeedback (e.g., ADHD, Substance Abuse, Optimal Performance, etc.)