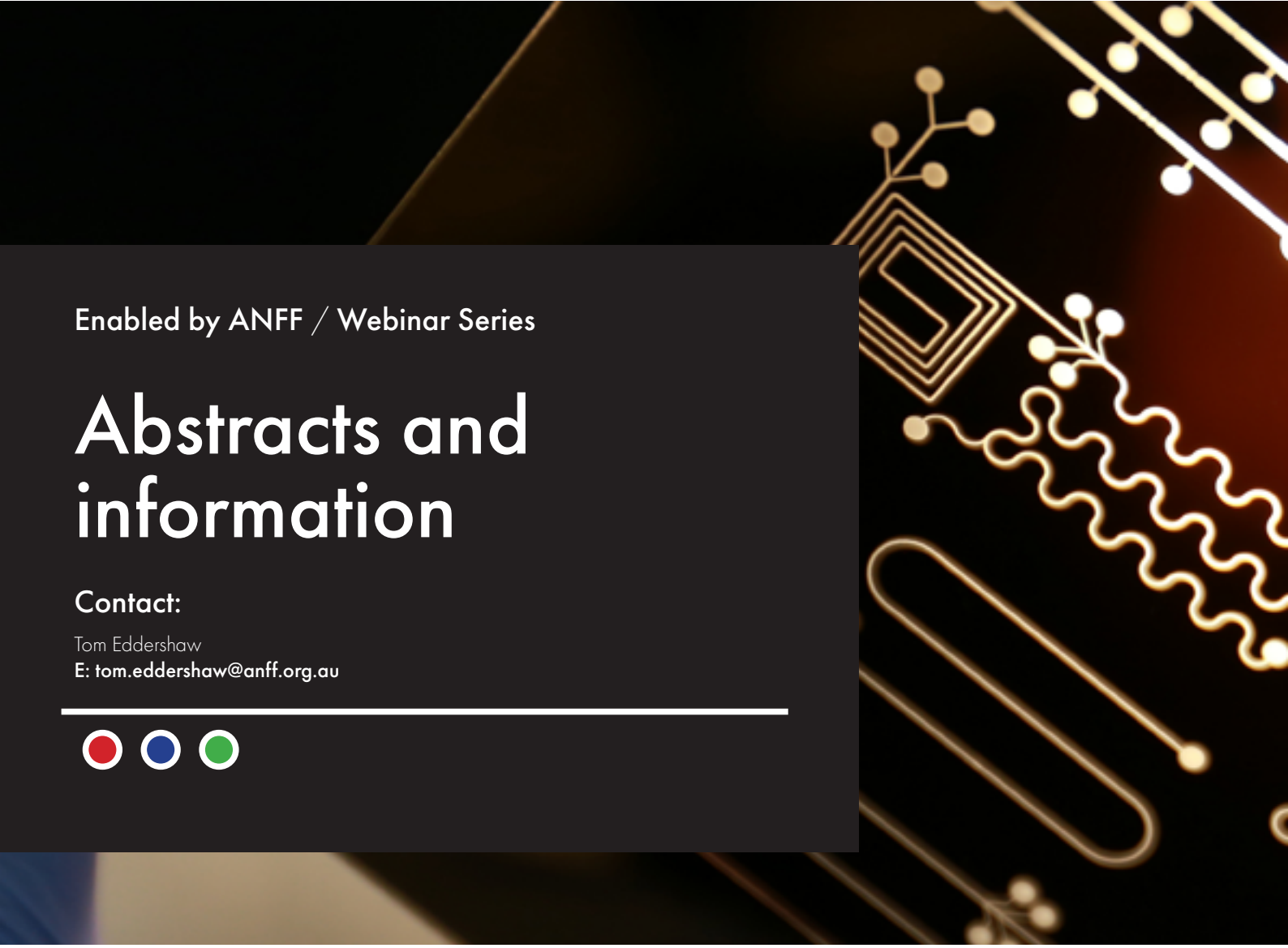

Enabled by ANFF / Webinar Series

Abstracts and information

Contact:

Tom Eddershaw
E: tom.eddershaw@anff.org.au

Starting in October, ANFF is hosting six free webinars to celebrate the exciting science being conducted with the assistance of the network.

We hope that you'll join us to hear about the exciting developments that ANFF has been enabling. Please find the talk abstracts below.

If you have not yet registered for the webinar series, please do so by clicking **this link**. This will ensure you receive the relevant information.

This webinar series has been introduced due to the situation in Melbourne making it unsafe for us to proceed in with the ANFF Retreat and Research Showcase in a responsibly safe fashion.

The "in person" part of the event, themed on the title *Enabled by ANFF*, will be held 11-13 May 2021 in Melbourne. More details to come.

If you have any questions, please contact **Tom Eddershaw**.

This event would not be possible without the support of our valued sponsors.

Event and Gala Dinner sponsor

Dynaflow

Event sponsors

AVT SERVICES · AXT · COLTRONICS · scitek · ThermoFisher SCIENTIFIC · Leica MICROSYSTEMS · ZEISS · NANOVACUUM · OLYMPUS

Six webinars will be held, with one focused on each of the following research priority areas.

~~Construction Science (21 October)~~

~~New and novel technologies to enhance construction materials and buildings of the future.~~

MedTech (28 October)

Developments in medical technologies that will help form Australia's economic future.

Space and Defence (4 November)

Furthering the technologies designed to aid space exploration, or to view Earth from high above.

Comms and Cybersecurity (11 November)

An overview of research that is improving the transmission or security of communication and data.

Energy (18 November)

Improving the energy outlook via new technologies or increasing the efficiencies of established ones.

Food and Agribusiness (25 November)

Uses of technology to improve the quality of food, or to help produce it.

Each online session will be one hour long and will feature two talks.

Enabled by ANFF / Webinar Series

Medtech

Speaker:

Dr Anthony Brewer
WearOptimo

Managing diseases with microwearable sensors

Biography: Anthony has more than 10 years experience in leading roles in industry, start-ups, academia and medical device R&D in the UK, France and Australia. He is now Head of R&D at Brisbane based start-up, WearOptimo.

Anthony completed his PhD in physics from the University of Cambridge, led a team in Professor Kendall's spin out company (Vaxxas), and founded a start-up (agAlytics). He was awarded a Brisbane Lord Mayor's Entrepreneur grant in 2016.

Abstract: Growing healthcare challenges are accelerating the need for radical solutions in getting the right therapy, in the right amount, to the right person at the right time.

Such 'personalised medicine' often requires simple ways to measure key health parameters continuously and rapidly. This is particularly important in states of health or disease that are subject to rapid change, with serious consequences (e.g. dehydration, heart attacks or 'cytokine storms' which may result from infections, such as with COVID-19 or drug reactions for example).

Brisbane-based WearOptimo, a partner innovation company of the Australian National University, is working to improve the detection of health parameters and we explored the question: *What if there were a way to detect biological indicators of health or disease instantly and continuously by sensing on the patient? What if there were a way to share this information quickly and easily with patients, clinicians and carers so that they can take appropriate action? Anytime, anyplace and specifically where time matters.*

It turns out that a simple, pain-free wearable device can detect the body's biomarkers that are present in the fluid bathing the cells in the superficial layers of the skin. Our Microwearable sensors can be configured to detect a wide range of clinically relevant indicators of health or disease status in a small, sticker-like format.

WearOptimo's head of R&D will present an introduction to WearOptimo and discuss how WearOptimo's technology is creating simple, painless, wearable medical devices that interact with our skin and which have the potential to monitor and manage a range of diseases 'when time matters most'.

Enabled by ANFF / Webinar Series

Medtech

Speaker:

Professor Gordon G. Wallace
The ARC Centre of Excellence for Electromaterials Science.

3D Bioprinting – Positioning for Translation

Biography: Professor Gordon Wallace is involved in the design and discovery of new materials as well as the development of innovative fabrication and characterization methods. Gordon is committed to the use of fundamental breakthroughs in these areas to drive new technologies in Energy and Health.

He is committed to fundamental research and the translation of fundamental discoveries into practical applications. He is a passionate communicator, dedicated to explaining scientific advances to all in the community from the lay person to the specialist.

He was appointed as an Officer of the Order of Australia 26 January 2017 and received Wollongong's award for Innovation in 2017 as well as serving Wollongong's Australia Day Ambassador. Gordon was named NSW Scientist of the Year 2017. He received the Eureka Prize for Leadership in Science and Innovation in 2016 and was appointed to the Prime Ministers Knowledge Nation 100 in 2015. Gordon is a Fellow of the Australian Academy of Science, Australian Academy of Technological Sciences and Engineering (ATSE), Institute of Physics, and Royal Australian Chemical Institute (RACI). He is a corresponding member of the Academy of Science in Bologna.

Abstract: 2020 has been an interesting year. The COVID-19 pandemic has highlighted the need for research organisations to accelerate translation and the need to pivot to meet emergency demands. The situation has shown that research organisations are capable of both, but the alignment of technical and non-technical areas with usually disparate agendas is required.

The activities pursued in 2020 have helped develop our translational pipeline for 3D bioprinting. This pipeline has been in construction for a number of years and traverses activities in fundamental discoveries to commercially sustainable use in a clinical environment.

A number of examples will be provided in this webinar to illustrate the journey. These include our ventures with iFix, Axcelda, 3D printed ears and wound healing/skin regeneration. Also important are the unexpected opportunities to deliver impact that we have encountered on the way.

Without the skills and infrastructure provided by ANFF, this journey could not have started.