

# 5TH ANNUAL 3D Med

AUSTRALIA CONFERENCE

2  19

#3dMed19

14-16<sup>th</sup> November 2019

## Institutional Partners



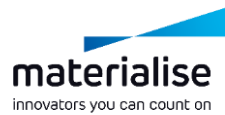
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# 2019 ORGANISING COMMITTEE

## Conveners

Jason Chuen

Jasmine Coles-Black

## Chairs

Niranjan Hiremath

Elizabeth Sigston

Blake Cochran

Peter Lee

Felix Sim

Naomi Paxton

Kate Fox

Cathal O'Connell

Darpan Shidid

David Ackland

Payal Mukherjee

Mathilde Desselle

Toan Pham

Ian Chao

Tracie Barber

## Abstract Review Committee

Blake Cochran

Tracie Barber

Mathilde Desselle



## VENUES

### 3D Med Australia 2019 (November 15-16)

AAMI Park  
Olympic Blvd  
Melbourne VIC 3000

<https://www.aamipark.com.au/arriving-and-access/maps/>

### Preconference Workshops (November 14)

#### Anatomical Modelling Workshop

Electrical Engineering Room 121  
Building 193, Parkville Campus  
The University of Melbourne

<https://maps.unimelb.edu.au/parkville/building/193>

#### Stratasys & Fusetec Workshop - the New J750 Digital Anatomy Technology

Electrical Engineering Room 121  
Building 193, Parkville Campus  
The University of Melbourne

<https://maps.unimelb.edu.au/parkville/building/193>

#### Women in 3D Technologies Networking Event

Milk the Cow Carlton  
323 Lygon St  
Carlton VIC 3053

<https://milkthecow.com.au/pages/locations>

## VENUES

### Preconference Tours (November 14)

#### VR Buffet Tour @ SBS Digital Learning Hub

Room W313, Medical Building  
Building 181, Parkville Campus  
The University of Melbourne

<https://biomedsciences.unimelb.edu.au/study/dlh#contact-us>

#### New Experimental Technology (NExT) Lab Tour @ Melbourne School of Design

Glyn Davis Building  
Melbourne School of Design  
Building 133, Parkville Campus  
The University of Melbourne

<https://msd.unimelb.edu.au/contact>

#### BioFab3D Tour @ St Vincent's Hospital Melbourne

Clinical Sciences Building  
St Vincent's Hospital Melbourne  
29 Regent St  
Fitzroy VIC 3065

<https://www.biofab3d.org/>

#### Centre for Additive Manufacturing Lab Tour @ RMIT

Advanced Manufacturing Precinct  
RMIT Melbourne City Campus  
58 Cardigan St  
Carlton VIC 3053

<https://www.rmit.edu.au/about/our-locations-and-facilities/facilities/research-facilities/advanced-manufacturing-precinct/contact-us>

# Preconference Workshops and Tours

## TIMES AND VENUES

### Thursday November 14

0830-1000	Anatomical Modelling Workshop	Electrical Engineering Room 121 Building 193, Parkville Campus The University of Melbourne
1000-1200	Stratasys & Fusetec Workshop - the New J750 Digital Anatomy Technology	Electrical Engineering Room 121 Building 193, Parkville Campus The University of Melbourne
1200-1300	Break	
1300-1400	VR Buffet @ SBS Digital Learning Hub	Medical Building Building 181, Parkville Campus The University of Melbourne
1400-1430	NEXt Lab Tour @ Melbourne School of Design	Glyn Davis Building Melbourne School of Design Building 133, Parkville Campus The University of Melbourne
1500-1530	BioFab3D Tour @ St Vincent's Hospital Melbourne	Clinical Sciences Building St Vincent's Hospital Melbourne 29 Regent St Fitzroy VIC 3065
1600-1700	Centre for Additive Manufacturing Lab Tour @ RMIT	Advanced Manufacturing Precinct RMIT Melbourne City Campus 58 Cardigan St Carlton VIC 3053
1700-1800	Break	
1800-Late	Women in 3D Technologies Networking Drinks (all welcome!)	Milk the Cow Carlton 323 Lygon St Carlton VIC 3053

## Program Outline

### Friday November 15

0800-0830	Registration	Foyer
0830-0845	Frank McGuire MP, Parliamentary Secretary for Medical Research	Lecture Theatre
0845-0900	Prof Guy Maddern, Royal Australasian College of Surgeons	Lecture Theatre
0900-1030	Presurgical Planning Plenary: Jason Chuen	Lecture Theatre
1030-1100	Morning Tea	Trade Area
1100-1215	Cardiovascular Applications	Lecture Theatre
1215-1315	Lunch	Trade Area
1315-1445	3d Visualisation Keynote: Charles Sevigny	Lecture Theatre
1445-1515	Afternoon Tea	Trade Area
1515-1700	Innovation and Industry Keynote: David Ackland	Lecture Theatre
1700-1800	Quickshot Session 1	Lecture Theatre

### Saturday November 16

0800-0830	Quickshot Session 2	Lecture Theatre
0830-1030	Bioprinting Plenary: Mia Woodruff Keynote: Gordon Wallace	Lecture Theatre
1030-1100	Morning Tea	Trade Area
1100-1245	Synergy & Design	Lecture Theatre
1245-1345	Lunch	Trade Area
1345-1500	Ethics & Governance	Lecture Theatre
1500-1530	Afternoon Tea	Trade Area
1530-1800	Validation in 3D Technologies Keynote: Blake Cochran	Lecture Theatre

## Sessions

### Friday November 15: Presurgical Planning

Jason Chuen	Plenary: New Technologies	0900-1915
Xiaowei Wang	3D FLECT- Fusion Imaging and Emerging Technologies	0915-0930
Amy Baker	Optimising Imaging for 3D Planning	0930-0945
Joseph Ischia	3D Visualisation in Complex Urooncological Surgery	0945-1000
Felix Sim	3D Printing Craniofacial Implants	1000-1015
	Panel Discussion	1015-1030
	<b>Morning Tea</b>	1030-1100

### Friday November 15: Cardiovascular

Carmine Gentile	Cardiac Bioprinting	1100-1115
Niranjan Hiremath	3D Printing in Complex Aortic Arch Disease	1115-1130
Pujith Vijayaratnam	3D Printing Technologies in Experimental Fluid Dynamics Models of Bridged Arteries	1130-1145
Jasmine Coles-Black	A Technique to Produce Physician Modified Stent Grafts	1145-1200
	Panel Discussion	1200-1215
	<b>Lunch</b>	1215-1315

### Friday November 15: Visualisation

Charles Sevigny	Keynote: The Virtual Heart	1315-1330
Mathilde Desselle	No more boring stints in hospitals waiting rooms! Serious games for patient education	1330-1345
Ben Loveridge	VR and Presurgical Planning	1345-1400
Michelle Rank	Bending the knee: can VR rule clinical training paradigms?	1400-1415
Andrew Hardidge	3D Printed Acetabular Models for Prosthesis Sizing	1415-1430
	Panel Discussion	1430-1445
	<b>Afternoon Tea</b>	1445-1515



## Friday November 15: Innovation and Industry

David Ackland	Keynote: Engineering the Human Jaw Joint	1515-1530
Mark Roe	Dissecting Anatomy- An Entrepreneur's Perspective	1530-1545
George Dimitroulis	Digital Advances in Maxillofacial Surgery	1545-1600
Richard Stratton	Patient's Perspective	1600-1615
Karen Reynolds	MDPP- Supporting Medical Innovation	1615-1630
Anna Ridgers	3D Printing a Tracheobronchial Tree for Bronchoscopy Training	1630-1645
	Panel Discussion	1645-1700
	<b>Quickshot Session 1</b>	<b>1700-1800</b>

## Sessions

### Saturday November 16: Bioprinting

	<b>Quickshot Session 2</b>	<b>0800-0830</b>
Mia Woodruff	Plenary: Directions of Bioprinting	0830-0900
Claudia di Bella	3D Bioprinting: A Surgeon's Perspective	0900-1915
Michael Mueller	Bioprinting at CSIRO	0915-0930
Payal Mukherjee	The Journey of the Bioprinted Ear	0930-0945
Behzad Shiroud Heidari	Bioengineering of Hard-Soft Tissue Interfaces	0945-1000
	Panel Discussion	1000-1015
Gordon Wallace	Keynote: Bioprinting	1015-1030
	<b>Morning Tea</b>	<b>1030-1100</b>

### Saturday November 16: Synergy and Design

Icaro Ibanez Arricivita	The Aesthetics of Prosthetics	1100-1115
XiaoPeng Li	Implant design	1115-1130
Tegan Cheng	Designing and developing medical devices for children	1130-1145
Tom Williamson	Self-Driving Tools and Surgical Instrument Flight: Developing Robotics for the OR	1145-1200
Toh Yen Pang	Designing Prostheses	1200-1215
Mark Midwinter	VR and Simulation of Uncommon Time Critical Medical Interventions	1215-1230
	Panel Discussion	1230-1245
	<b>Lunch</b>	<b>1245-1345</b>

## Saturday November 16: Ethics and Governance

Cathal O'Connell	Don't Print Your Heart Out: The Dangers of Sensationalism in Science	1345-1400
Paul Fennessy	Department of Health and Human Services – An Evidence Review of the Surgical Applications of 3D Printing	1400-1415
John Skerritt	TGA- Regulatory Reforms to Personalised Medical Devices	1415-1430
Kate Fox	The Fun Patent Talk	1430-1445
	Panel Discussion	1445-1500
	<b>Afternoon Tea</b>	<b>1500-1530</b>

## Saturday November 16: Validation

Blake Cochran	Keynote: 3D Printing Awesomeness	1530-1545
Kate Dunn	3D Printed Surgical Simulation and Haptics	1545-1600
Peter Lee	ARC Training Centre for Medical Implant Technologies: Building Multidisciplinary Teams and Projects	1615-1630
Karel Habig	3D Printing in Helicopter Retrieval	1630-1645
Atandrilla Das	3D Visualisation in Robotic Surgery	1645-1700
Nathaniel McTaggart	Starting a 3D Printing Service at Auckland City Hospital	1700-1715
Stewart Ryan	3D Printing in Veterinary Education	1715-1730
	Panel Discussion	1730-1745
	<b>Closing Ceremony</b>	<b>1745-1800</b>