



WORLD OF  
**DRONES**  
CONGRESS®  
2019

## Wednesday 25 September 2019

Optional Workshops (additional fees may apply)

9:30am – 4:30pm **Drone Masterclass: How to get the best out of your drone**  
\$225 By Carys Kaiser AKA The Drone Lass  
📍 Brisbane Convention & Exhibition Centre, Exhibition Hall 1, Hospitality Suite

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10:00am – 12:00pm **Drones: Enhancing work safety workshop**  
\$110 Hosted by Workplace Health and Safety Queensland, Office of Industrial Relations  
📍 Queensland University of Technology (QUT), OJW Function Room, Level 12, S Block

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12:00pm – 5:00pm **Design a drone hackathon**  
Hosted by Queensland University of Technology (QUT)  
📍 QUT, STEM Student Engagement, O304, Level 3, O Block

## Thursday 26 September 2019

8:30am – 5:00pm **Accelerator Hub Open**  
📍 Expo *The Accelerator Hub at WoDC 2019 will target entrepreneurs, start-ups and new businesses, giving them an opportunity to demonstrate how their innovations and technologies can enhance Real Business and Opportunity in the Global Drone Economy.*

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8:30am – 5:00pm **Exhibition Open**  
📍 Expo

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9:00am – 10:30am **1. Plenary**

📍 Plenary ***Drones in Space***  
*Chair: Kylie Walker (Science & Technology Australia, Australia)*  
1.1 Opening Ceremony: Queensland Government  
1.2 Professor Lisa Harvey-Smith (University of New South Wales, Australia)

📍 Brisbane Convention & Exhibition Centre: Exhibition Hall 1

Congress program subject to change. Last updated 23/09/19

- 1.3 Professor Paul Bertsch (Queensland Government / CSIRO, Australia)
- 1.4 Professor Elanor Huntington (Australian National University, Australia)
- 1.5 Professor Gordon Wyeth (Queensland University of Technology, Australia)
- 1.6 Panel Discussion moderated by Chair, Kylie Walker (Science & Technology Australia, Australia)

*Panellists:*

- (i) Professor Paul Bertsch (Queensland Government / CSIRO, Australia)
  - (ii) Professor Lisa Harvey-Smith (University of New South Wales, Australia)
  - (iii) Professor Elanor Huntington (Australian National University, Australia)
  - (iv) Professor Gordon Wyeth (Queensland University of Technology, Australia)
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10:30am – 11:00am **World first – Media Event**

📍 Plenary

**Live from North Queensland video streaming of CrocSpotter AI algorithm via ultra low latency thanks to AWS (Amazon Web Services) and UTS from Westpac Little Ripper**

*In a world first, a Westpac Little Ripper drone will be flying in North Queensland streaming live video to the World of Drones Congress with the revolutionary CrocSpotter AI Algorithm, seeking and identifying crocodiles with a 93% accuracy and a latency of less than 1 second. This ultra low latency streaming of the CrocSpotter AI Algorithm via AWS cloud, means the difference between live and death for search and rescue UAVs.*

*Presented by Ben Trollope CEO of The Ripper Group and Professor Michael Blumenstein of University of Technology Sydney and Amazon Web Services.*

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11:00am – 11:30am **Morning Tea**

📍 Expo

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11:30am – 1:00pm **2. Plenary**

📍 Plenary

***Autonomous Transport Systems***

*Chair: Zoe Eather (Arup, Australia)*

**2.1 *Vision Fusion for Virtual UAVs***

Professor Ted Goranson (Griffith University, Australia)

**2.2 *Beasts of Burden: Designing Autonomous Cars with Cross-Species Social Contract Theory***

Dr Kate Devitt (Department of Defence – Science and Technology, Australia)

**2.3 *CSIRO participation at the DARPA Subterranean Challenge: Preliminary Results and Lessons Learned from the Tunnel Circuit Event***

Dr Emili Hernandez (CSIRO, Australia)

**2.4 *Emesent's Autonomous Drone Systems and the DARPA SubTerraanean Challenge***

Farid Kendoul (Emesent, Australia)

**2.5 *Decentralised UTM architectures, made possible by blockchain***

Rory Houston (Skyy Network, Australia)

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1:00pm – 2:00pm Lunch

📍 Expo

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2:00pm – 3:30pm 3. Concurrent Sessions

📍 Plenary

### 3.1 National Drone Defence Industries Forum

*Opening Remarks, The Hon Cameron Dick MP, Minister for State Development, Manufacturing, Infrastructure and Planning*

*Chair: Retired Rear Admiral Simon Cullen AM, CSC (Department of State Development, Manufacturing, Infrastructure and Planning, Australia)*

#### 3.1.1 *How innovation in drones is enhancing capability*

Assistant Secretary Andrew Hodgkinson (Department of Defence, Australia)

#### 3.1.2 *Army needs from Australia's Sovereign Industrial (Drone) Capability*

LTCOL Keirin Joyce, CSC (Australian Army, Australia)

#### 3.1.3 *Foundation and framework for integration of UAS (model aircraft, rocketry and RPAS) in the Australian Air Force Cadets*

WGCDR Samantha Freebairn (Royal Australian Air Force, Australia)

SQNLDR Luke Ridgway (Royal Australian Air Force, Australia)

FSGT (AAFC) Shane St Clair (Royal Australian Air Force, 221SQN, Australia)

#### 3.1.4 *UAS Track Profiling: Countering Threat Networks Using Drones*

Adam Hammond (GEOINT Solutions, Australia)

📍 Hospitality Suite

### 3.2 Business, Movies & Media

*Chair: Alan Jones (M8 Ventures, Australia)*

#### 3.2.1 *Augmenting Reality - The role of drones in cultural storytelling*

Mikaela Jade (Indigital, Australia)

#### 3.2.2 *The visual language of Drones*

Carys Kaiser (BBC, United Kingdom)

#### 3.2.3 Sarah Moran (Girl Geek Academy, Australia)

#### 3.2.4 *How thermal drones work*

Randall Warnas (FLIR, United States of America)

#### 3.2.5 *The sky is the limit!*

Grant Cameron (National Centre of Indigenous Excellence, Australia)

#### 3.2.6 *"Drone-a-mation"*

Priscilla Riscica (Gerard Coutts & Associates, Australia)

#### 3.2.7 *Drones in Hollywood*

Aaron Corera (XM2, Australia / Global)

#### 3.2.8 *Drones - The future of storytelling*

Neil McGregor (Glass Engine / Cloudland Pictures, Australia)

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3:30pm – 4:00pm Afternoon Tea

📍 Expo

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4:00pm – 5:30pm 4. Workshops

📍 Plenary

### 4.1 World of Drones Education

📍 Brisbane Convention & Exhibition Centre: Exhibition Hall 1

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*Chair: Professor Jonathan Roberts (Queensland University of Technology, Australia)*

**4.1.1 *STEM: Empowering our Students***

Nicola Flanagan (Education Queensland, Australia)

Anna Kinnane (Queensland College of Teachers, Australia)

**4.1.2 *Training remote pilots - Why it's essential and the future of certification***

Ryan McMahon (Remote Aviation Australia, Australia)

**4.1.3 *Using drones as a context for developing 21st C capabilities***

Kathryn Tully (Queensland Curriculum and Assessment Authority, Australia)

**4.1.4 *STEAM vs. STEM - Using Edutainment to Increase Youth Engagement***

Victor Villegas (Oregon State University, United States of America)

**4.1.5 *Underwater Drones for Education***

Peter Tattersall (Australian National Maritime Museum, Australia)

**4.1.6 *Entrepreneurial Education - The Seaton High School UAV Specialist***

***Program: Industry qualifications, deep engagement and academic excellence through UAV application***

Tom Griffith (Seaton High School – South Australia, Australia)

📍 Hospitality Suite

**4.2 *Smart Cities & Property***

*Chair: Bruce Thompson (NSW Department of Finance, Services & Innovation, Australia)*

**4.2.1 *Drones and Future Cities***

Adam Fennessy (EY, Australia)

**4.2.2 *The Digital Twin – Drones and Reality Modelling***

Glen Burke (Bentley Systems, Australia)

**4.2.3 *Capture, Analyse, Act: Building smarter, safer and more efficient cities with drone data***

Jono Millin (DroneDeploy, United States of America)

**4.2.4 *Impact of Property for Smart Cities - How Volvo Group's Real Estate footprint contributes to manufacturing and technology for smart cities***

Leah Ong (Volvo Australia, Australia)

**4.2.5 *Faster, greener & affordable - The potential impact of delivery drones in our cities***

Terrance Bouldin-Johnson (Wing, Australia)

**4.2.6 *Drone Program at Wollondilly Shire Council***

Cindy Wang (Wollondilly Shire Council, Australia)

**4.2.7 *Odour sampling at a SEQ composting facility***

Dr Miguel Alvarado (Department of Environment and Science, Australia)

📍 Mezzanine M1

**4.3 *Queensland University of Technology – Journalism Students (By-invitation)***

*Hosted by Carys Kaiser (BBC, United Kingdom)*

5:30pm – 7:00pm

**Networking Reception**

📍 Expo

*Flying Futures: Opportunities in the Drone Ecosystem*

One (1) ticket to the Networking Reception & IDEATION-Hub is included in full-time registrations

*Advance Queensland are pleased to be partnering with Business Models Inc. to present the Ideation-hub at the World of Drones Congress to explore the future*

of drones and unlock the potential that they can bring to Queensland. We encourage all congress delegates to share their significant expertise and join the conversation.

## Friday 27 September 2019

8:30am – 4:00pm **Accelerator Hub and Exhibition Open**

📍 Expo

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9:00am – 10:30am **5. Plenary**

📍 Plenary

### ***National Drone Safety Forum***

*Chair: Associate Professor Catherine Ball (World of Drones, Australia / United Kingdom)*

#### ***5.1 Elevating Safety and Security Through Uniform Laws and Innovation***

Diana Cooper (PrecisionHawk, United States of America)

#### ***5.2 Direction of Drone Safety Development in Japan***

Dr Kakuya Iwata (Japan UAS Industrial Development Association (JUIDA), Japan)

#### ***5.3 Safely Managing Australia's Rapidly Changing Skies***

Michelle Bennetts (Airservices Australia, Australia)

#### ***5.4 Recognition and Management of Compliance and Regulatory Risk in the Drone Industry***

Marianne Robinson (Sparke Helmore Lawyers, Australia)

#### ***5.5 Legal Implications on the Latest Drone Technologies***

Tom Pils (The Drone Lawyer, Australia)

5.6 Jackie Dujmovic (Hover UAV, Australia)

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10:30am – 11:00am **Morning Tea**

📍 Expo

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11:00am – 12:30pm **6. Plenary**

📍 Plenary

### ***Drones in Disaster & Humanitarian Response***

*Chair: Ronan Sweeney (Royal Flying Doctor Service, Australia)*

#### ***6.1 SharkSpotter and CrocSpotter: Using Artificial Intelligence and drone-based technology to protect lives and marine species***

Ben Trollope (Westpac Little Ripper, Australia)

Professor Michael Blumenstein (University of Technology Sydney, Australia)

#### ***6.2 Drone SAR: Raising the Standards to Save More Lives***

Gemma Alcock (SkyBound Rescuer, United Kingdom)

#### ***6.3 Drones for good in Defence and Emergency Services organisations***

Rob Sutton (Mirragin Unmanned Systems, Australia)

#### ***6.4 Unmanned Aerial Systems supporting Humanitarian & Disaster Response***

LTCOL Rod Lang, CSC (Australian Army, Australia)

6.5 *RPAS, Veterans and Volunteers: Team Rubicon Australia and the use of RPAS for damage assessments following the 2018 Indonesian tsunami*

Richard Adams (Team Rubicon Australia, Australia)

6.6 *Autonomous Aerial Platforms to monitor water quality from inaccessible water bodies*

Dr Simon Albert (The University of Queensland, Australia)

6.7 *Drones in far and remote places - Let's start at the very beginning....*

Helen Murray (Queensland Health, Australia)

6.8 *Taking to the air to transform last-mile healthcare delivery*

Josh Tepper (Swoop Aero, Australia)

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12:30pm – 1:30pm Lunch

📍 Expo

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1:30pm – 3:00pm 7. Concurrent Sessions

📍 Plenary

**7.1 Geospatial, Data & Land Use**

*Chair: Evangeline Corcoran (Queensland University of Technology, Australia)*

7.1.1 *Digital Earth Australia: From Satellites to Insights*

Dr Stuart Minchin (Geoscience Australia, Australia)

7.1.2 *Global agriculture – Current drone realities vs myths, and the future*

Fiona Lake (Fiona Lake Photography, Australia)

7.1.3 *Drones, AI and Agriculture*

Jerome Leray (InFarm, Australia)

7.1.4 *Using drone in agriculture*

Wayne Lording (Cloverdale International, Australia)

7.1.5 *Drone imagery for today and tomorrow*

Andrew Stewart (Department of Natural Resources, Mines and Energy, Australia)

7.1.6 *Smart drone and sensor data integration for precision irrigation*

Dr Stephen Xu (Central Queensland University, Australia)

7.1.7 *Drones & precision agriculture: What does this mean to people on the ground such as farmers in GBR catchments?*

Marcus Bulstrode (Queensland Department of Agriculture & Fisheries, Australia)

7.1.8 *Application of drone-based hyperspectral imaging to coral reef monitoring*

Dr Jon Kok (Australian Institute of Marine Science (AIMS), Australia)

7.1.9 *Place and Identity – [www.groundtruthnetwork.com](http://www.groundtruthnetwork.com)*

Grania Kelly (StarSapphire Productions, Australia)

📍 Hospitality Suite **7.2 Unmanned Traffic Management & Counter-Drone Capabilities**

*Chair: Jackie Dujmovic (Hover UAV, Australia)*

7.2.1 *Highways in the Sky*

Bashir Khan (AirMatrix, Canada)

7.2.2 *Building the UTM in Singapore*

Patrick Weeden (Scout Aerial Group, Australia)

Dr Terrence Martin (Nova Systems, Australia)

7.2.3 *European Union's initiative to mitigate the threat of malicious drones and introduce a complete counter-drone solution via R&D*

George Kampas (KEMEA, Greece)

*7.2.4 How Drones will Change Government Approach to Traffic, Natural Disasters, and Public Safety*

Bobby Ouyang (Skyebrowse, United States of America)

Dr Peter Jin (Skyebrowse, United States of America)

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3:00pm – 4:00pm

📍 Plenary

**8. Drones Futures & Closing Remarks**

*Presenters:*

*Associate Professor Catherine Ball (World of Drones, Australia / United Kingdom)*

*Dr Sue Keay (CSIRO, Australia)*

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**CONGRESS ENDS**

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