OzFlux 20th Anniversary Agenda July 16-17th 2020

AIM: To celebrate achievements of Australia and New Zealand OzFlux and TERN EP and contributions to flux science and other themes. Examine lessons learnt and future of flux data to drive ecosystem prediction capability. Aim also to use ideas presented here to build paper for GCB 25th anniversary. Draft outline of paper to be developed from the meeting with synthesis of lessons learnt through the conference.

Session structure to have synthesis from a theme leader(s) can be early career scientist (around 15-20 minutes) followed by case studies (e.g. student or investigator talks) or discussion (e.g. panel).

Venue and registration via Zoom 'Webinar'. You MUST register in ADVANCE for each day of the Webinar. After registering, you will receive a confirmation email containing information about joining the webinar.

Session Theme Chairs (Please email chairs if you are interested in presenting in the sessions by 10th June).

Theme 1: Contributions to and future Integration of remote sensing (**Alfredo Huete**)

Theme 2: Contributions to and future Integration of Modelling (**Martin De Kauwe**)

Theme 3: Contributions to and future Integration of Trace gasses/Agric (**Johannes Laubach**)

Theme 4: New horizons (technical innovation like SIF) (**Caitlin Moore**)

Theme 5: Contributions to and future ALPINE/WETLAND Integration of Ecosystem Processes (**Mark Hovenden**)

Theme 6: Contributions to and future Integration of decadal processes (**James Cleverly**)

DAY 1 – 16th July 2020

Time (AEST)	What	Presenter	USA (PDT)	EU	WA	NZ
9:50	**Welcome and Opening**	**Beryl Morris – TERN Director**			**7:50**	
10:00	**Plenary: International contribution of OzFlux. How flux measurements have contributed to our understanding of Global Change Biology inc. long term data (40+20min)**	**Dennis Baldocchi (invited)**	**17:00**	**2:00**	**8:00**	**12:00**
11:00	**Celebration 20th anniversary (opening comments). Aussies and Kiwis, past OzFlux directors, Caitlin Moore (video), Jason Beringer (game)**	**Helen Cleugh (Chair)**	**18:00**	**3:00**	**9:00**	**13:00**
12:00	**LUNCH**		**19:00**	**4:00**	**10:00**	**14:00**
12:45	**Theme 1: Contributions to and future Integration of remote sensing**	**Alfredo Huete (Chair)**	**19:45**	**4:45**	**10:45**	**14:45**
1.	Syntheses and integration of multi-satellite remote sensing and flux towers to study-Australian land surface phenology and land carbon sink	Xuanlong Ma			Lanzhou University, China	
2.	Spatial and temporal scaling of flux tower latent heat flux to Australia-wide estimates using remote sensing and meteorological covariates	Tom Van Niel			CSIRO Land & Water, Australia	
3.	A brief exploration of the relationship between biophysical variables measured by eddy covariance towers in NZ grasslands and remotely sensed proxies	Andrew McMillan			CarbonWatch/Environmental Analytics NZ Ltd., New Zealand	
4.	Assessing the Impact of Extreme Droughts on Dryland Vegetation by Satellite Solar-induced Chlorophyll Fluorescence	Song Leng (student presenter)			University of Technology Sydney, Australia	

5.	Global terrestrial ecosystem respiration maps derived from BESS-TER - A remote sensing-based and semiempirical model		Bolun Li		Seoul National University, Seoul, Republic of Korea	
6.	Global methane emission quantification based on GOSAT data and a bottom-up method based on SAR data in tropical rice paddies		Hironori Arai		Centre d'Etudes Spatiales de la Biosphere, France	
7.	Exploration of hypertemporal Himawari-8 geostationary greenness measures over OzFlux tower sites		Qiaoyun Xie & Ngoc Tran		University of Technology Sydney, Australia	
13:30	**Break (15 minutes)**		**20:30**	**5:30**	**11:30**	**15:30**
13:45	**Theme 2: Contributions to and future Integration of Modelling**	**Martin De Kauwe** (Chair)	20:45	5:45	11:45	15:45
1.	The GPP temperature response of Australian wooded ecosystems		Alison Bennett (student presenter)		University of Melbourne, Australia	
2.	Tighten the bolts and nuts on GPP estimations from sites to the globe: an assessment of LUE models and supporting data fields		Zhao Wang		Central South Forestry University and Technology, China	
3.	Using eddy covariance to optimally merge gridded estimates of evapotranspiration		Sanaa Hobeichi		University of New South Wales, Australia	
4.	Understanding controls on CO2 fluxes from forests an d pastures using eddy-covariance data and physiologically-based modelling		Miko Kirschbaum		Manaaki Whenua-Landcare Research, New Zealand	
5.	PLUMBER2: land surface model evaluation using eddy covariance data		Gab Abramowitz		University of New South Wales, Australia	
6.	Could carbon transferred by wandering animals explain the observed differences in soil carbon due to irrigation under grazed pastures?		Liyin Liang		Manaaki Whenua-Landcare Research, New Zealand	
7.	Modelling the impacts of irrigation on carbon balances in a dairy grazed pasture		Donna Giltrap		Manaaki Whenua-Landcare Research, New Zealand	
8.	Realizing iterative ecological forecasting through assimilating sensor measurements into models		Yuanyuan Huang		CSIRO, Australia	
9.	Identifying areas at risk of drought-induced tree mortality across South-Eastern Australia		Martin De Kauwe		University of New South Wales, Australia	
15:00	**Break (15 minutes)**		**22:00**	**7:00**	**13:00**	**17:00**
15:15	**Theme 3: Contributions to and future Integration of Trace gasses/Agriculture**	**Johannes Laubach (Chair)**	**22:15**	**7:15**	**13:15**	**17:15**
1.	Does carbon lost during periodic maize silage cropping recover following a return to permanent pasture		Aaron Wall (student presenter)		University of Waikato, New Zealand	
2.	Annual carbon balance for lucerne is highly sensitive to management practices of irrigation, grazing and cutting		Johannes Laubach		Manaaki Whenua-Landcare Research, New Zealand	
3.	Water and carbon dynamics from Mitchell grasslands following drought		David Rowlings		Queensland University of Technology, Australia	
4.	CO2, N2O and CH4 fluxes from streams		Julia Jakobsson (student presenter)		University of Auckland, New Zealand	

5.	GHG emissions from grazed pasture on a drained peatland		David Campbell			University of Waikato, New Zealand	
6.	Mitigating paddock-scale net greenhouse gas emissions using mixed-species grassland including plantain		Scott Graham			Manaaki Whenua-Landcare Research, New Zealand	
7.	Improved gap filling approach for N2O fluxes allows determination of separate annual budgets and uncertainties for two adjacent grazed pastures from one flux tower		Jordan Goodrich			University of Waikato, New Zealand	
16:00	**VIRTUAL DRINKS FIREPLACE hangout**		**23:00**	**8:00**	**14:00**	**18:00**	

DAY 2 – 17th July 2020

Time (AEST)	**What**	**Who**	**USA Cal**	**Europe**	**WA**	**NZ**
10:45	**New technology – LICOR (30 min)**	**George Burba**	**17:45**	**2:45**	**8:45**	**12:45**
11:15	**New technology – Campbell Scientific (30 min)**	**Ivan Bogoev & Ben Conrad**	**18:15**	**3:15**	**9:15**	**13:15**
11:45	**Theme 4: New horizons and technical innovations**	**Caitlin Moore (Chair)**	**18:45**	**3:45**	**9:45**	**13:45**
1.	Biogenic controls on CO_2 fluxes in a suburban neighbourhood	Andrew Oliphant			San Francisco State University, USA	
2.	New opportunities from ECOSTRESS	Yi Yin			Caltech, USA	
3.	Remote sensing scaling and radiative transfer modelling of solar-induced chlorophyll fluorescence	Zbynek Malenovsky			University of Tasmania, Australia	
4.	Challenges in scaling solar-induced fluorescence from leaves to structurally complex forest canopies	Will Woodgate			University of Queensland, Australia	
5.	Solar-induced fluorescence: modeling and measurements to better understand photosynthetic processes	Alex Norton			Jet Propulsion Lab, NASA, USA	
6.	Deep learning and multistage ensembles in flux data gap filling: comprehensive comparison	Atbin Mahabbati (student presenter)			University of Western Australia, Australia	
7.	Space-time-equitable carbon budgets: A new approach that accounts for heterogeneous vegetation and sampling patterns	Anne Griebel			University of Western Sydney, Australia	
8.	Overview of CarbonWatch – a project focused on the integration of eddy covariance fluxes from New Zealand agriculture grassland ecosystems with Inverse Atmospheric CO2 Modelling	Liz Keller			GNS Science & Victoria University of Wellington, New Zealand	
12:30	**LUNCH**		**19:30**	**4:30**	**10:30**	**14:30**
13:15	**Theme 5: Contributions to and future ALPINE/WETLAND Integration of Ecosystem Processes**	**Mark Hovenden (Chair)**	**20:15**	**5:15**	**11:15**	**15:15**
1.	*Carbon and water fluxes from Australian Alpine Peatlands and Grasslands: new results and future prospects*.	Samantha Grover, Meeruppage Gunawardhana (SP), Charuni Jayasekara (SP), Ewen Silvester			RMIT University, Australia	

2.	*Impacts of restoration and climate variability on peatland greenhouse gas fluxes.*	Marion Nyberg (student presenter)	University of British Columbia, USA			
3.	*Update on NZ wetland flux research*.	David Campbell and Jordan Goodrich	University of Waikato, New Zealand			
4.	*High variation in CO_2 and CH_4 fluxes from mangroves of the Ayeyarwady Delta, Myanmar.*	Clint Cameron and Lindsay Hutley	Charles Darwin University, Australia			
5.	*Ecosystem processes in the Australian Mountain Research Facility*	Mark Hovenden	University of Tasmania, Australia			
14:00	**Break (15 minutes)**		**21:00**	**6:00**	**12:00**	**16:00**
14:15	**Theme 6: Contributions to and future Integration of decadal processes**	**James Cleverly (Chair)**	**21:15**	**6:15**	**12:15**	**16:15**
	Panel Discussion on key decadal scale processed that are important to OzFlux, plus panel Q&A	Belinda Medlyn – University of Western Sydney Helen Cleugh – CSIRO Jason Beringer – University of Western Australia Lindsay Hutley – Charles Darwin University				
15:00	**Integrating Critical Zone Processes**	**Sally Thompson**	**22:00**	**7:00**	**13:00**	**17:00**
15:15	**COFFE Break (30 minutes)**		**22:15**	**7:15**	**13:15**	**17:15**
15:45	**Synthesis (Lessons learnt)**	**Theme chairs plus Helen, James and Jason**	**22:45**	**7:45**	**13:45**	**17:45**
16:30	**Plenary: Data futures (40+20min)**	**Dario Papale (invited)**	**23:30**	**8:30**	**14:30**	**18:30**
17:30	**Conference final remarks and close (10 minutes)**	**Jason Beringer and David Campbell**	**0:30**	**9:30**	**15:30**	**19:30**

Unhangout to be used for breaks and social aspects.