

Eddy Covariance Flux Measurements Winter School
Vuwani Science Resource Centre, University of Venda, 10.-14.6.2019

Monday 10th June

Time	Session	Session leader	Location
9:00	Introduction & Official opening by the course hosting University partners	Natasha Potgieter, Dean Eric Maluta, Course Host University of Venda	Auditorium
9:30	Introduction to the content & aims of the course	Christian Brümmer, Thünen-AK	Auditorium
9:45	Introduction round: 2-minute power point presentations by teachers and course participants	Mari Bieri, Thünen-AK	Computer Room
11:00	TEA BREAK & NETWORKING		Courtyard
11:45	General overview of the current status of environmental observation in Africa – the SEACRIFOG project	Johannes Beck, SASSCAL	Computer Room
12:15	Which variables do we need to measure to improve global and African GHG budgets and estimate climate forcing components ?	Johannes Beck	Computer Room
12:45	LUNCH BREAK		Courtyard
14:00	Current data availability: monitoring networks & their spatial representativeness	Johannes Beck	Computer Room
14:45	Introduction to EFTEON: The Expanded Freshwater and Terrestrial Environmental Observation Network	Gregor Feig, SAEON/EFTEON	Computer Room
15:30	TEA BREAK & NETWORKING		Courtyard
16:00-17:00	Methodologies to measure GHG emissions in the terrestrial domain (<i>other than Eddy Covariance</i>)	Ana López-Ballesteros, TCD	Computer Room

Tuesday 11th June

Time	Session	Session leader	
9:00	Fundamentals of atmospheric monitoring: site considerations and instrumentation	Alecia Nickless	Computer Room
10:00	Inverse modelling: Introduction to atmospheric inversions with examples of applications in Africa	Alecia Nickless	Computer Room
11:00	TEA BREAK & NETWORKING		Courtyard
11:45	Eddy covariance - introduction	Christian Brümmer	Computer Room
12:45	LUNCH BREAK		Courtyard
14:00	Eddy covariance - instruments session	Christian Brümmer, Jean-Pierre Delorme, Jens Jüdt (Thünen-AK), Humbelani Thenga, Amukelani Maluleke (CSIR)	Computer Room/Vuwani tower (outside)
16:00	TEA BREAK & NETWORKING		Courtyard
16:30-17:15	Corrected CO₂ fluxes for the Great Fish Thicket	Tony Palmer (ARC)	Computer Room

Wednesday 12th June

Time	Session	Session leader	Location
9:00-10:30	Parallel sessions: <i>the group will be divided into two parts, and each will attend both of the hands-on sessions (1 and 2)</i> “Hands-on” session 1: Setting up and running an Eddy Covariance system	Christian Brümmer, Jean-Pierre Delorme, Jens Jüdt, Humbelani Thenga, Amukelani Maluleke	Computer Room/ Outside area
9:00-10:30	“Hands-on” session 2: Setting up an Automatic Weather Station (AWS)	Gregor Feig	Outside area
10:30	TEA BREAK & NETWORKING		Courtyard
11:15-12:45	“Hands-on” session 1: Setting up and running an Eddy Covariance system	Christian Brümmer, Jean-Pierre Delorme, Jens Jüdt, Humbelani Thenga, Amukelani Maluleke	Computer Room/ Outside area
11:15-12:45	“Hands-on” session 2: Setting up an Automatic Weather Station (AWS)	Gregor Feig	Outside area
12:45	LUNCH BREAK		Courtyard
14:00	Introduction: Working with cleaned flux data on model evaluation	Mohau Mateyisi (CSIR)	Computer room
14:30	Hands-on session with R: Working with cleaned flux data on model evaluation (<i>participants need laptops with R installed</i>)	Mohau Mateyisi	Computer room
15:30	TEA BREAK & NETWORKING		Courtyard
16:00-17:30	Hands-on session with R: Working with cleaned flux data on model evaluation	Mohau Mateyisi	Computer room
17:30 →	Joint dinner/ evening programme/ excursion TBA		

Thursday 13th June

Time	Session	Session leader	Location
9:00	EC project at the cherry plantations of the Eastern Free State (exact title TBA)	Phumudzo Tharaga (University of the Free State)	Computer room
10:45	TEA BREAK & NETWORKING		Courtyard
11:30	Skukuza site as an example of research questions conducted at long term flux measurement sites in Africa	Gregor Feig	Computer room
12:45	LUNCH BREAK		Courtyard
14:00-15:30	Parallel sessions 1 and 2 – group divided into two Hands-on session 1: Soil chamber measurements (with theory introduction)	Ana López-Ballesteros	TBA
14:00-15:30	Hands-on session 2: From raw data to processed quality assured fluxes	Christian Brümmer, Humbelani Thenga, Amukelani Maluleke	Computer room
15:30	TEA BREAK & NETWORKING		Courtyard
16:15-17:45	Hands-on session 1: Soil chamber measurements (with theory introduction)	Ana López-Ballesteros	TBA
16:15-17:45	Hands-on session 2: From raw data to processed quality assured fluxes	Christian Brümmer, Humbelani Thenga, Amukelani Maluleke	Computer room

Friday 14th June			
Time	Session	Session leader	Location
9:00	Using flux data in national terrestrial carbon accounting	Graham Von Maltitz (CSIR)	Computer room
10:00	Personalized support sessions (or TBA)	All course teachers	Computer room/Board room/TBA
11:00	TEA BREAK & NETWORKING		Courtyard
11:30	Personalized support sessions (or TBA)	All course teachers	Computer room/Board room/TBA
12:30	LUNCH BREAK		Courtyard
14:00	Final session: wrap-up, closing discussion, next steps & course feedback	Christian Brümmer & Gregor Feig	Computer room
15:00-18:00	Final ceremony; handing out course certificates; joint dinner & drinks		Science Centre