

# Annual Seminar 2018

## Earth system assimilation



10-13 September 2018

Monday 10 September

### Introduction to earth system data assimilation

**CHAIR: Massimo Bonavita (ECMWF)**

13:00-13:30	Registration and coffee	<i>Weather Room</i>
13:30-13:45	Welcome and opening	Andy Brown (Director of Research, ECMWF)
13:45-14:00	Introduction	Stephen English (ECMWF)
14:00-14:45	<b>1</b> Motivation and Methods in Earth System Data Assimilation	Mark Buehner (ECCC)
15:00-15:30	<i>Coffee break</i>	
15:30-16:15	<b>2</b> Evolution of global observing systems	John Eyre (Met Office)
16:30-17:15	<b>3</b> Towards coupled assimilation in operational systems	Patricia de Rosnay (ECMWF)
17:30	<i>Drinks reception</i>	

Tuesday 11 September

### Challenges in data assimilation

**CHAIR: John Eyre (Met Office)**

09:30-10:15	<b>4</b> Non-linearity and non-Gaussianity in variational data assimilation	Massimo Bonavita (ECMWF)
10:30-11:00	<i>Coffee break</i>	
11:00-11:45	<b>5</b> Ensemble Data Assimilation and Particle Filters for NWP	Roland Potthast (DWD)
12:00-12:45	<b>6</b> Characterising and modelling background error	Anthony Weaver (CERFACS)
13:00-14:00	<i>Lunch break</i>	
14:00-14:45	<b>7</b> Model error and parameter estimation	Chiara Piccolo (Met Office)
15:00-15:30	<i>Coffee break</i>	
15:30-16:15	<b>8</b> Issues specific to data sparse systems	Marc Bocquet (Ecole des Ponts Paris Tech)
16:30-17:15	<b>9</b> Characterising and modelling observation errors	Sarah Dance (Reading University)

## Wednesday 12 September

<b>Coupling methods in numerical weather prediction</b>		<b>CHAIR: Anthony Weaver (CERFACS)</b>
09:30-10:15	<a href="#">10</a> Land, ocean, sea ice, wave coupled model developments	Nils Wedi (ECMWF)
10:30-11:00	<i>Coffee break</i>	
11:00-11:45	<a href="#">11</a> Atmospheric composition coupled model developments and surface flux estimation	Saroja Polavarapu (ECCC)
12:00-12:45	<a href="#">12</a> Linear model and adjoint coupling	Marta Janiskova (ECMWF)
13:00-14:00	<i>Lunch break</i>	
14:00-14:45	<a href="#">13</a> Comparison of data assimilation coupling strategies for Earth system models	Sergey Frolov (NRL)
15:00-15:30	<i>Coffee break</i>	
15:30-16:15	<a href="#">14</a> Coupling through the observation operator	Alan Geer (ECMWF)
16:30-17:15	<a href="#">15</a> Coupled re-analysis	Dinand Schepers (ECMWF)
18:30	<i>Pre-dinner drinks</i>	
19:00	<i>Seminar dinner</i>	

## Thursday 13 September

<b>Status of and outlook for operational earth system assimilation</b>		<b>CHAIR: Patricia de Rosnay (ECMWF)</b>
09:30-10:15	<a href="#">16</a> Assimilation of Atmospheric Composition	Antje Inness (ECMWF)
10:15-11:00	<a href="#">17</a> Ocean Data Assimilation for Numerical Weather Prediction	Phil Browne (ECMWF)
11:00-11:30	<i>Coffee break</i>	
11:30-12:15	<a href="#">18</a> Coupled Land/Atmosphere Data Assimilation	Clara Draper (NOAA)
12:15-13:00	<a href="#">19</a> Towards operational earth system assimilation: challenges and priorities	Jean-François Mahfouf (Météo-France)
13:00-13:15	Closure	Andy Brown (ECMWF)
13:15-14:00	<i>Lunch break</i>	