

GCRF-EPSRC UK-APASI Programme
UK-Africa Postgraduate Study Institute in Mathematical Sciences



WORKSHOP 4: 15-17 March 2021

Modelling, Analysis, Numerical Methods and Applications of ODEs and SDEs

Monday 15th March 2021

09:30 – 09:45	Joining	Workshop login
09:45 – 09:55	Welcome	Madzvamuse, A. Holligan, L.
10:00 – 10:45	Lecture 1: Stephanie Portet	Title: <i>Basic modelling concepts</i>
10:55 – 11:00	Break	
11:00 – 11:45	Lecture 2: Stephanie Portet	Title: <i>Using model selection</i>
11:55 – 13:00	Lunch	
11:00 – 11:45	Lecture 3: Nikolaos Sfakianakis	Title: <i>Bridging the gap between SDEs and PDEs: Hybrid modelling with application in cancer tissue invasion</i>
13:55 – 14:00	Break	
14:00 – 14:45	Plenary Lecture: Prof. Alberto d'Onofrio	Title: <i>Behavioral Epidemiology of Infectious Diseases: its recent past and its future</i>
14:55 – 15:00	Break	
15:00 – 15:45	Summary of the Day	Panelists: <i>Portet, Sfakianakis, d'Onofrio</i>
15:45 – 16:30	Breakout Rooms	Informal discussions and networking
16:30	End of Day 1	

Tuesday 16th March 2021

09:45 – 09:55	Welcome	Workshop login
10:00 – 10:45	Lecture 4: Julien Arino	Title: <i>Numerical methods for SDEs</i>
10:55 – 11:00	Break	
11:00 – 11:45	Lecture 5: Sandile Motsa	Title: <i>Block hybrid methods for solving systems of non-linear ODEs</i>
11:55 – 13:00	Lunch	
13:00 – 13:45	Lecture 6: Shekar Venkataraman	Title: <i>CG and DG numerical methods for ODEs (Title to be confirmed)</i>
13:55 – 14:00	Break	
14:00 – 14:45	Lecture 7: Eduard Campillo-Funollet	Title: <i>Exhibiting open source numerical software packages</i>
14:55 – 15:00	Break	
15:00 – 15:45	Summary of the Day	Panelists: <i>Arino, Motsa, Venkataraman, Campillo-Funollet</i>
15:45 – 16:30	Breakout Rooms	Informal discussions and networking
16:30	End of Day 2	

Wednesday 17th March 2021

09:45 – 09:55 **Welcome**

10:00 – 10:45 **Lecture 8:** Fred Vermolen

10:55 – 11:00 **Break**

11:00 – 11:45 **Lecture 9:** Fred Vermolen

11:55 – 13:00 **Lunch**

13:00 – 13:45 **Lecture 10:** Fred Vermolen

13:55 – 14:00 **Break**

14:00 – 14:45 **Lecture 11:** Amnon J. Meir

14:55 – 15:00 **Break**

15:00 – 15:45 **Summary of the Day**

15:55 – 16:30 **Breakout Rooms**

16:30 **End of Workshop 4**

Workshop login

Title: *The theory of ODEs (existence, uniqueness, phase plane analysis, stability): Part I*

Title: *The theory of ODEs (existence, uniqueness, phase plane analysis, stability): Part II*

Title: *Cellular automaton model with applications to wound healing*

Title: *Numerical methods for stiff ODEs (Title to be confirmed)*

Panelists: Vermolen, Meir

Informal discussions and networking