



# MultiSim Modelathon

EPSRC Frontier Engineering  
in Multiscale Simulations

An event by EPSRC Frontier Engineering Award

## AGENDA, JOINING INSTRUCTIONS AND ACCOMMODATION FOR DAYS 1-4 PARTICIPANTS ONLY

Monday, 11 September 2017, The Diamond, 32 Leavygreave Road, Sheffield S3 7RD

Event Programme 11 September 2017		
Workroom 3, Level 2, The Diamond (all day)		
10:00	Registration and refreshments	
10:30	Welcome	<a href="#">Professor Damien Lacroix</a> Director of MultiSim, University of Sheffield
10:40	Multiscale Modelling of the Musculoskeletal System	<a href="#">Professor Damien Lacroix</a> Director of MultiSim, University of Sheffield
11:20	Loading Matters - Simulation based insights on degenerative joint disease	<a href="#">Professor Ilse Jonkers</a> University of Leuven
12:00	Lunch	
13:00	Testing of interventions for age-related diseases <i>in murine</i> models: do we need to do it?	<a href="#">Professor Ilaria Bellantuono</a> University of Sheffield
13:40	<i>In silico</i> preclinical investigations of bone health	<a href="#">Dr Enrico Dall'Ara</a> University of Sheffield
14:20	<i>In silico</i> approaches to replacing and reducing animals in biomedical research	<a href="#">Dr Kamar Ameen-Ali</a> National Centre for the Replacement Refinement & Reduction of Animals in Research
15:00	Posters and refreshments	
15:30	Flash presentations	Participants
16:00	Round-table discussion: How can we combine experimental and computational research to reduce <i>in vivo</i> testing in a pre-clinical setting?	
17:00	End of day one	
18:00	Evening barbecue and drinks at the University Arms	

Hosted by



## Modelling competition event details

The event will commence on Day 1 with a symposium where participants will have the opportunity to present their work as a poster and a 3-minute presentation. The symposium will be held in Workroom 3 on the second floor of the Diamond.

On the morning of Day 2, the participants will be introduced to the challenges and the data and compute infrastructure. They will have opportunity to familiarise themselves with the infrastructure before the challenges begin.

After lunch on Day 2, the participants will be divided into teams grouped by expertise. The teams will be sent to their allocated workspaces to discuss and start to solve the multiscale modelling challenges.

On the morning of Day 3, the second set of challenges will be issued, building on the results of the challenges from Day 2. The participants will then be regrouped into groups of complementary expertise to address these integration challenges.

Experts will be on hand to answer questions, give advice and provide a focus for ideas. However, each team must independently come up with their own solution strategy.

Oral presentations before a panel of experts will take place on the morning of Day 4. Each team will be allowed 15 minutes for a presentation explaining their strategy, whether successful or not, and 5 minutes will be allocated for questions. The members of the winning team will be presented with a prize.

Day 2	Tuesday, 12 September 2017	
<b>Modelathon Competition</b>		
Computer Room 3, Level 2, The Diamond (all day, except breaks)		
09:00	Welcome	Professor Damien Lacroix, Director of MultiSim, University of Sheffield
09:15	Challenge #1: Musculoskeletal	Dr Giuliano Lamberto
09:30	Challenge #2: Finite Element Analysis	Dr Muhammad Qasim
09:45	Challenge #3: Haemodynamics	Dr Andrew Narracott
10:00	How to use the infrastructure	Will Griffiths and Ben Hughes
10:15	Log in and data retrieval exercise	All
10:45	<b>Refreshments</b>	<b>Workroom 3, Level 2, The Diamond</b>
11:15	Familiarisation with infrastructure	
12:00	<b>Lunch</b>	<b>Workroom 3, Level 2, The Diamond</b>
13:40	Day 2 expertise groups formed for Day 2 challenges	
15:00	<b>Refreshments</b>	<b>Workroom 3, Level 2, The Diamond</b>
15:30	Day 2 challenges	
18:30	<b>Evening Meal and Drinks</b>	<b>Workroom 1, Ground, The Diamond</b>

Day 3	Wednesday, 13 September 2017	
Computer Room 3, Level 2, The Diamond (all day, except breaks)		
09:00	Day 3 challenges explained	Professor Damien Lacroix
09:15	Complementary expertise groups formed for Day 3 challenges	
10:30	Refreshments	Workroom 3, Level 2, The Diamond
11:00	Day 3 challenges	
12:00	Lunch	Workroom 3, Level 2, The Diamond
13:10	Day 3 challenges	
15:00	Refreshments	Workroom 3, Level 2, The Diamond
15:30	Day 3 challenges	
18:30	Evening Meal & Drinks	Workroom 1, Ground, The Diamond

Day 4	Thursday, 14 September 2017	
09:00	Finalising presentations	Computer Room 3, Level 2, The Diamond
Presentations		
Workroom 3, Level 2, The Diamond (rest of day)		
09:30	Introduction to team presentations	Professor Damien Lacroix
09:40	Team #1 Presentation	
10:00	Team #2 Presentation	
10:20	Team #3 Presentations	
10:40	Team #4 Presentation	
11:00	Team #5 Presentation	
11:20	REFRESHMENTS / Presentation deliberations (Closed Session)	Meeting room 1, Level 3, The Diamond (Seminar Room 1 on the Map)
11:50	Winners announced!	Workroom 3, Level 2, The Diamond
12:00	Lunch	Workroom 3, Level 2, The Diamond
13:00	End	

## (Information for Day 1-4 Participants only)

### The Diamond Arrivals & registration DAY 1

#### Venue, directions and parking

The Modelathon will be held at The Diamond, which is one of the University of Sheffield's newest venues – a contemporary teaching centre, located close to the city centre.

A detailed map of the location and directions can be found at:

<https://www.sheffield.ac.uk/visitors>

For rooms within the diamond: <https://www.sheffield.ac.uk/diamond/floor-plans>

For car parking visit: <https://www.sheffield.ac.uk/parkingservices>

#### Step 1-Registration

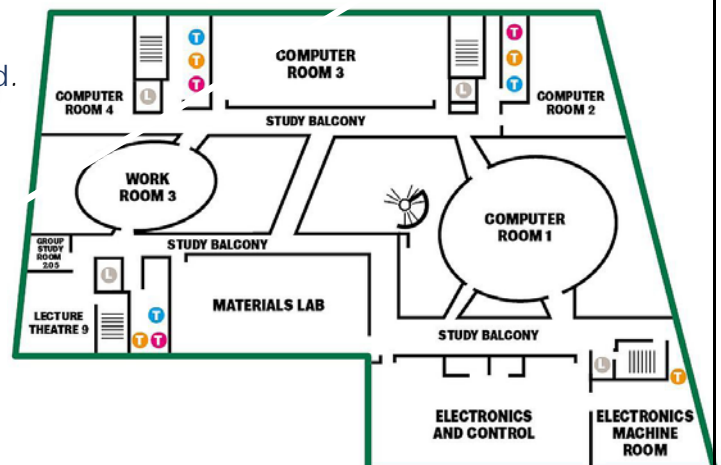
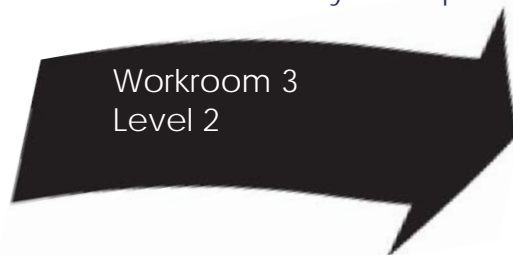
Use the entrance on Leavygreave road. The registration desk is on your right. Collect your name badge, visitor swipe card, and drop off any luggage. **Please do not go directly to Endcliffe Village as your rooms will not be ready. Your luggage will be stored securely and can be collected after the evening meal.**

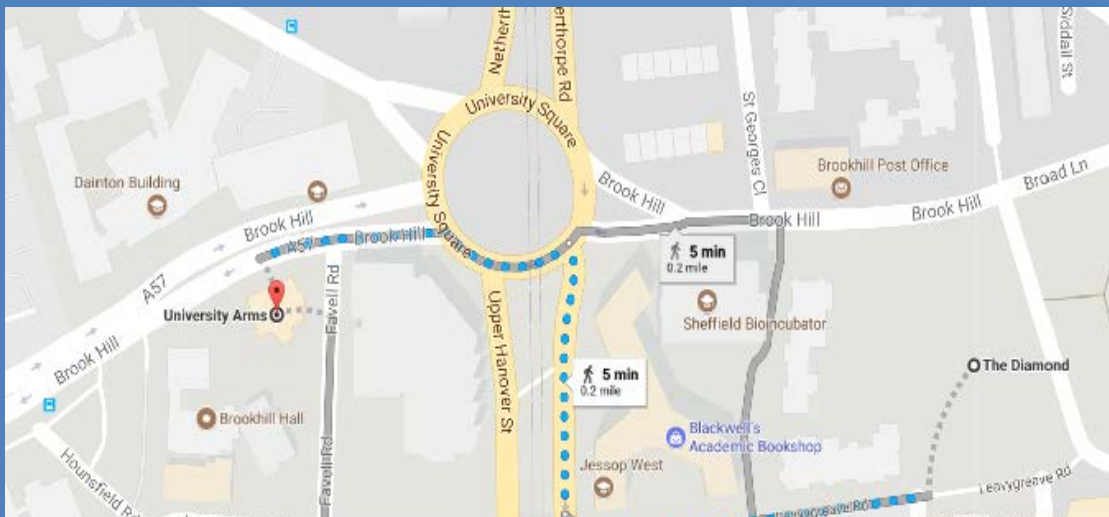


#### Step 2- Registration

Proceed to the Symposium.

N.B. You cannot enter/exit without your swipe card.

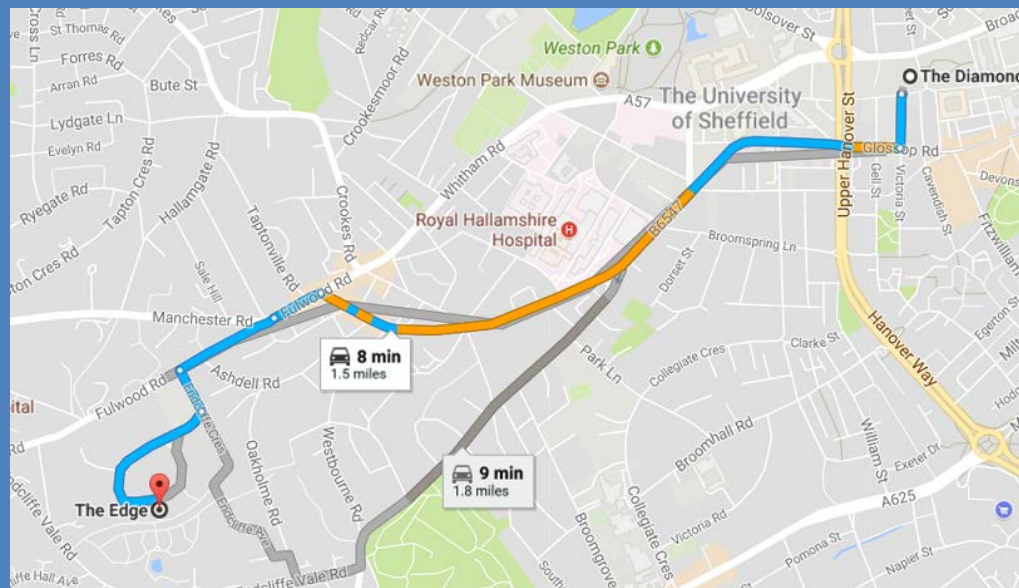




### Step 3 Evening dinner & drinks instructions for 11 September only

At 17:30 all please assemble at the event registration desk.

We will walk over to The University Arms for dinner and drinks. Food will be served 18:00 onwards. Dinner on 12 & 13 September will be held at The Diamond (see agenda).



### Step 4 Accommodation check-in, The Edge

34 Endcliffe Cres, Sheffield S10 3ED

At 19:45 on 11 September we will walk back from The University Arms to The Diamond reception, and collect your luggage.

There will be transport at 8pm to take you to The Edge reception where you will collect your keys for your accommodation.

It is your responsibility to make it from Endcliffe Village to The Diamond on Tuesday & Wednesday. It is a 20 minute walk or you may take the bus (120)

On 14 September there will be transport leaving at 8.30 from The Edge reception, please check out and bring your luggage with you. This can be stored at The Diamond until the end of the event.