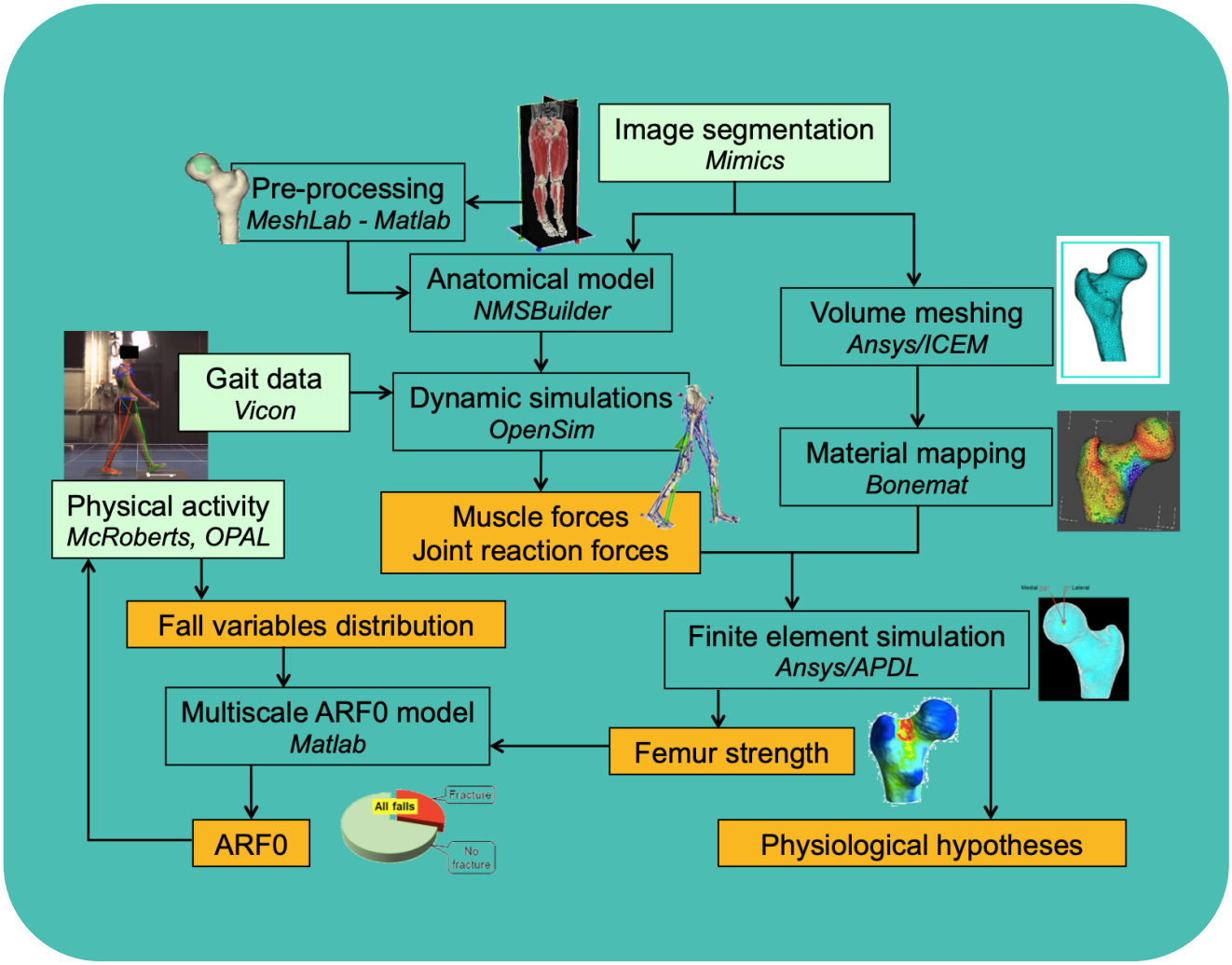
Clinical Workflow

Developing a personalised musculoskeletal modelling framework to improve accuracy of hip fracture risk prediction in the short (1 year, ARF0) and medium (10 years, ARF10) terms by 10%.

Ambition:

To generate a computational framework to improve the current fracture risk predictions, using data collected at body (gait data and physical activities) and organ level (personal-specific computer model predictions).

Results of the simulations are then coupled with mathematical models at population level to evaluate the individual's risk of fracture in the next 10 years (ARF10), achieving a longer term prediction.



Clinical Workflow

Prof Claudia Mazzà
Mechanical Engineering
MultiSim Director, Lead of WP2
c.mazza@sheffield.ac.uk

Dr Xinshan Li
Mechanical Engineering
Lead of WP3
xinshan.li@sheffield.ac.uk

Prof Eugene McCloskey
Oncology&Metabolism
Lead of WP8
e.v.mccloskey@sheffield.ac.uk

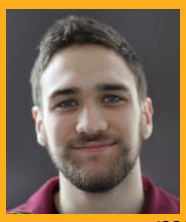
Dr Pinaki Bhattacharia
Mechanical Engineering
Lead of WP9
p.bhattacharya@sheffield.ac.uk

Dr Lingzhong Guo
Automatic control and Systems Engineering
Leader of WP6
l.guo@sheffield.ac.uk

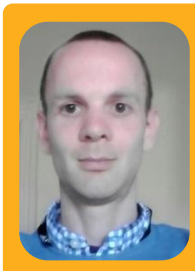
Ms Erica Montefiori
Mechanical Engineering
Pesearcher in WP2
e.montefiori@sheffield.ac.uk

Dr Margaret Paggiosi
Oncology&Metabolism
PDRA in WP8
m.a.paggiosi@sheffield.ac.uk

Dr Zainab Ak Al Tai
Mechanical Engineering
PDRA in WP3
z.altai@sheffield.ac.uk



Mr Michael Woodward
Bioengineering
Researcher in WP2
mwoodward1@sheffield.ac.uk



Mr Will Griffiths
Mechanical Engineering
SD in WP9
w.griffiths@sheffield.ac.uk

Previous Members of MULTISIM who contributed to the Workflow:
Prof Marco Viceconti, Prof Damien Lacroix, Ms Barbara Kalkman, Dr Bart van Veen, Dr Andre Castro, Dr Muhammad Qasim, Dr Yuzhu Guo, Ms Christobel Gondwe.