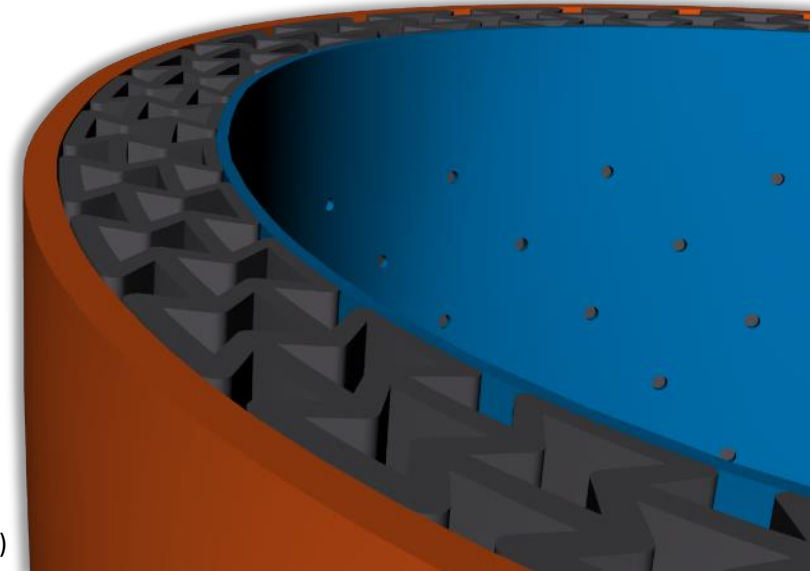


Metamaterials for Health

Dr Tom Allen FIMechE



Metamaterials for Health



HEALTHY LIVING



HEALTHCARE



EXERCISE



WELLBEING



AGEING




MONITORING &
DIAGNOSIS




THERAPEUTICS




Lead(s)



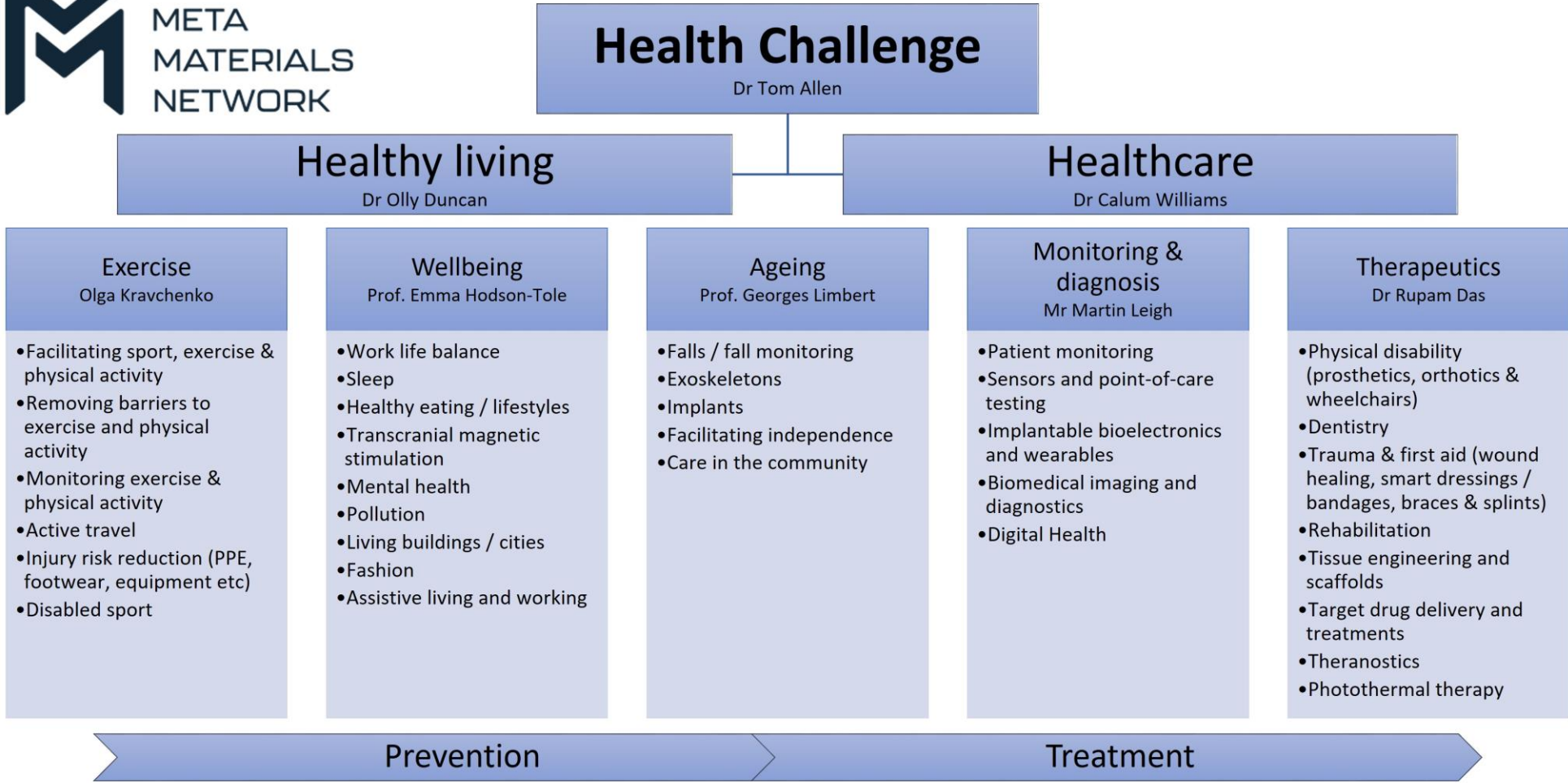
Tom Allen
Manchester Metropolitan University



Oliver Duncan
Manchester Metropolitan University



Calum Williams
University of Cambridge



Exercise
Olga Kravchenko

- Facilitating sport, exercise & physical activity
- Removing barriers to exercise and physical activity
- Monitoring exercise & physical activity
- Active travel
- Injury risk reduction (PPE, footwear, equipment etc)
- Disabled sport

Wellbeing
Prof. Emma Hodson-Tole

- Work life balance
- Sleep
- Healthy eating / lifestyles
- Transcranial magnetic stimulation
- Mental health
- Pollution
- Living buildings / cities
- Fashion
- Assistive living and working

Ageing
Prof. Georges Limbert

- Falls / fall monitoring
- Exoskeletons
- Implants
- Facilitating independence
- Care in the community

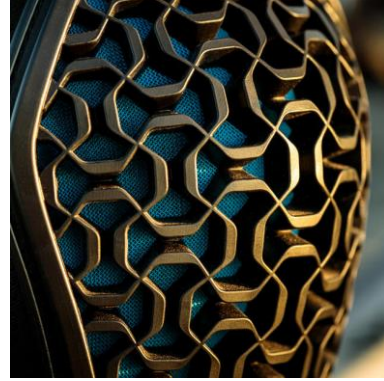
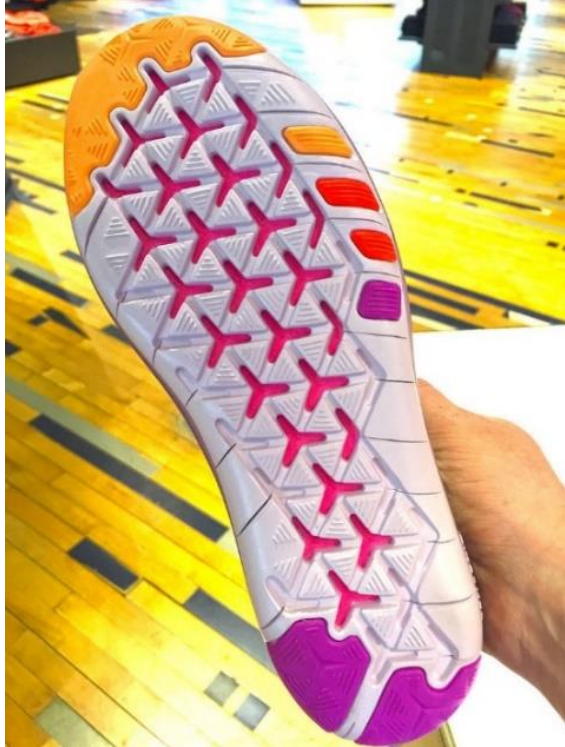
Monitoring & diagnosis
Mr Martin Leigh

- Patient monitoring
- Sensors and point-of-care testing
- Implantable bioelectronics and wearables
- Biomedical imaging and diagnostics
- Digital Health

Therapeutics
Dr Rupam Das

- Physical disability (prosthetics, orthotics & wheelchairs)
- Dentistry
- Trauma & first aid (wound healing, smart dressings / bandages, braces & splints)
- Rehabilitation
- Tissue engineering and scaffolds
- Target drug delivery and treatments
- Theranostics
- Photothermal therapy

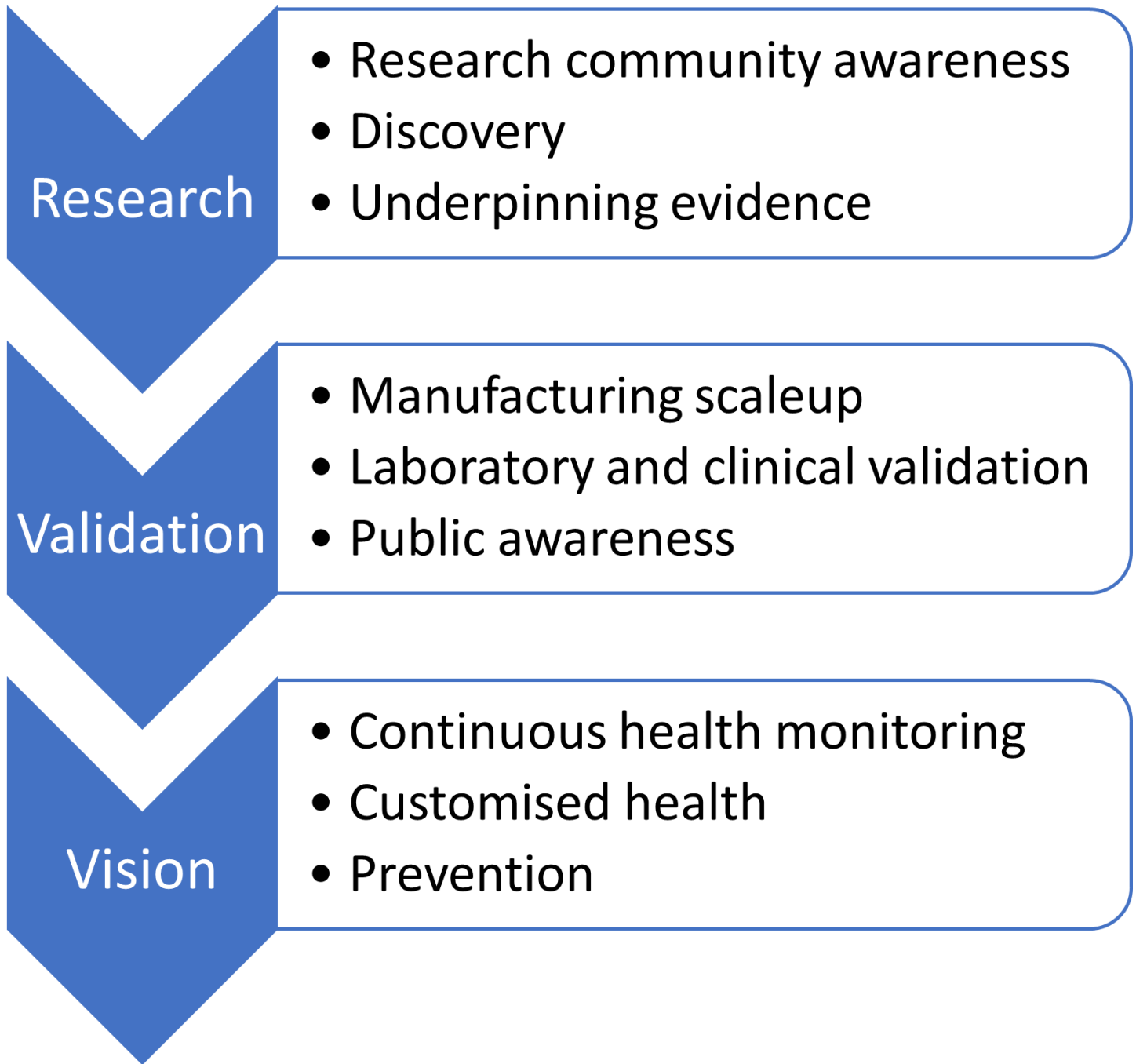




M UK
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NETWORK







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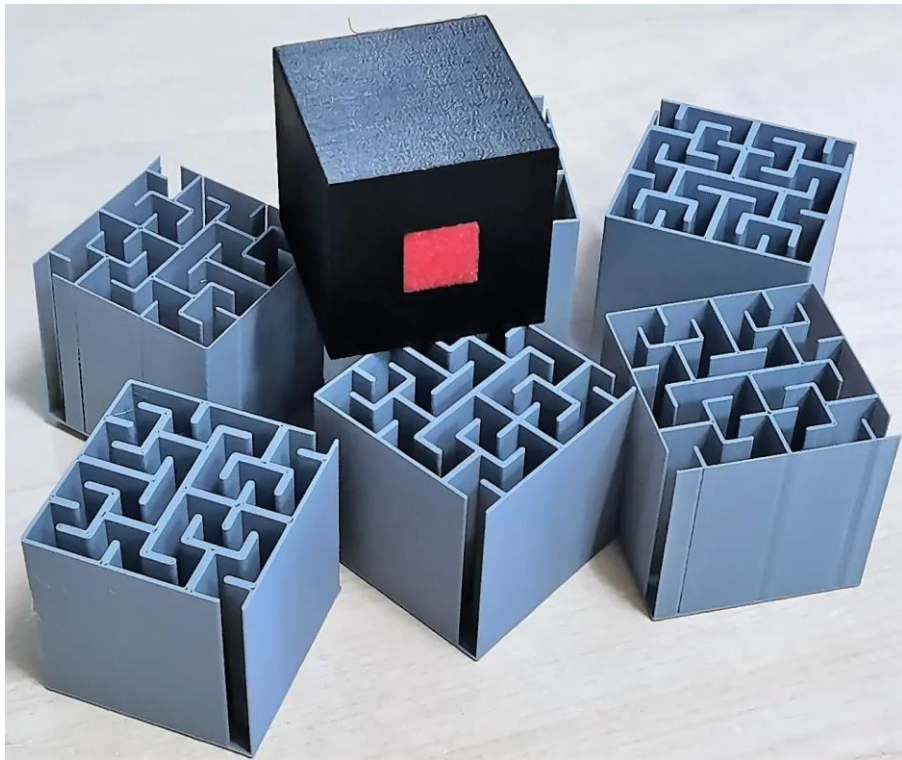


Image credit: Gianni Comandini



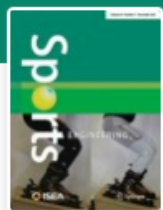
UK SPORTS ENGINEERING SEMINAR DAY 2023

Wednesday 12th April



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Sports Engineering



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Call for Papers: Topical Collection on Metamaterials in Sport

Guest Editors


Dr. Oliver Duncan, Manchester Metropolitan University, UK

Dr Enrique Cuan-Urquizo, Tecnológico de Monterrey, Mexico

Dr Gregory Chaplain, University of Exeter, UK

Dr. David Newman, University of Exeter, Exeter, UK

Mrs. Olga Kravchenko, Rheon Labs & Imperial College London, UK

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Submission deadline: 1 March 2025

For authors

[Submission guidelines](#)

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20th Sept. 2023 - Manchester



Metamaterials for Health



HEALTHY LIVING



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DIAGNOSIS



THERAPEUTICS



10:00 - 10:30	<p style="text-align: center;">Metamaterials for Health</p> <p style="text-align: center;">1. Introduction</p> <p style="text-align: center;">2. Healthcare theme</p>	<p style="text-align: center;">1. Dr Tom Allen (Manchester Metropolitan University)</p> <p style="text-align: center;">2. Dr Calum Williams (University of Cambridge)</p>
10:30 - 11:00	BREAK	
11:00 - 12:00	Keynote: Metamaterials for Healthcare	Prof Amir Zadpoor (Delft University of Technology)
12:00 - 12:45	Round table discussions: MM for Healthcare	<u>Chair:</u> Dr Calum Williams (University of Cambridge)
12:45 - 14:15	LUNCH BREAK	
14:15 - 15:30	<p style="text-align: center;">Metamaterials for Healthy Living</p> <p style="text-align: center;">1. Healthy living theme</p> <p style="text-align: center;">2. Keynote: Healthy living</p>	<p style="text-align: center;">1. Dr Oliver Duncan (Manchester Metropolitan University)</p> <p style="text-align: center;">2. Marc Douglas (World Rugby)</p>
15:30 - 16:00	BREAK	
16:00 - 16:50	Round table discussions: MM for Healthy Living	<u>Chair:</u> Dr Oliver Duncan
16:50 - 17:00	Summary & close	Dr Tom Allen



Thank you for listening.