



Nachiappan Chockalingam

Date of birth: 4 Sep 1968

Nationality: British

Gender: Male

CONTACT

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europass

WORK EXPERIENCE

1 JAN 1998 – 30 APR 2025 Stoke on Trent, United Kingdom

Professor of Clinical Biomechanics Staffordshire University

- Lead and coordinate the Centre for Biomechanics and Rehabilitation Technology
- Chair, University Research Ethics and Governance Committee.
- Research governance
- Mentoring senior research staff at the University.

10 JUN 2005 – CURRENT Manchester, United Kingdom

Director Analitica Limited

Biomechanics Consultancy

- Research and Development
- Product testing
- Education Support
- Support on Research Governance

19 MAY 2017 – CURRENT Manchester, United Kingdom

Director Alegre

Research and Development

1 SEP 2012 – CURRENT Malta

Affiliate Professor University of Malta

- Mentoring Early Career Researchers
- Supervision of MSc/ PhD Students

1 SEP 2014 Chennai, India

Visiting Professor Sri Ramachandra University

- Mentoring Early Career Researchers
- Supervision of Research Staff

EDUCATION AND TRAINING

16 JAN 1998 – 1 APR 2004 Stoke on Trent, United Kingdom

PhD Staffordshire University

Address Leek Road, ST4 2DF, Stoke on Trent, United Kingdom

30 SEP 1989 – 31 AUG 1990 Dundee, United Kingdom

MSc University of Dundee

Address Perth Road, DD1 4HN, Dundee, United Kingdom

31 JUL 1985 – 31 JUL 1989 Chidambaram, India

BEng Annamalai University

Address Annamalai Nagar, Chidambaram, India

1 MAR 2006 – 1 SEP 2006 United Kingdom

Expert Witness Certificate Cardiff University

LANGUAGE SKILLS

MOTHER TONGUE(S): Tamil

Other language(s):

English

Listening C2

Spoken production C2

Reading C2

Spoken interaction C2

Writing C2

Hindi

Listening A2

Spoken production A1

Reading A2

Spoken interaction A1

Writing A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Word | Microsoft Excel | Microsoft Powerpoint | Google Drive | Google Docs | Microsoft Office | Skype | LinkedIn | Instagram | Twitter | Internet user | Social Media | Zoom | Facebook | Outlook | Power Point | Written and Verbal skills | Good listener and communicator | Team-work oriented | Organizational and planning skills | Analytical skills | Motivated | Decision-making | Presenting | Critical thinking | Strategic Planning | WhatsApp | Research and analytical skills | Responsibility | Detail-Oriented | Flexibility | Excellent writing and verbal communication skills | Empathic listener | Good time management | Teamwork | flexible | positive thinking | Problem-solving | Ability to Work Under Pressure | Good at being proactive and efficient in high stress situations | Presentation and negotiation skills | Excellent organizational planning and solving problems in short time | Research | Efficient multi-tasking | Gmail

MANAGEMENT AND LEADERSHIP SKILLS

Director, Centre for Biomechanics and Rehabilitation Technologies

- Lead and coordinate the Clinical Biomechanics team and line manage several academic and research staff including budget responsibilities for research, research staff and staff development.
- CBRT was pivotal to the University's REF submission to UoA 12. The majority of the outputs and both impact case studies were CBRT's. 87% of our research outputs were rated "internationally excellent" or "world leading" and 75% of research impact is recognised as "very considerable" or "outstanding". Compared to UoA15 REF 2014, our research income has increased from £586,680 to £3,184,731, the number of peer-reviewed publications from 156 to 494. I led and managed a significant amount of this funding and other budgetary responsibilities.
- Coordinate the activities of visiting professors and visiting fellows. Scheme Leader for the Biomechanics suite of PG awards. Lead, large research and enterprise projects.

Link https://youtu.be/raPnk_0U8k?feature=shared

Non Executive Director, Age UK Staffordshire

- Governance responsibilities to oversee the Senior Management Team to deliver the organisation's vision to support the social care needs of the vulnerable population.
- I was involved in discussions around the merger of 3 Age UK organisations into one and also contributed to the strategic decisions to secure the future of the organisation post-pandemic.

Non Executive Director, Human Study AV

- Governance responsibilities and help raise funds to train Prosthetists and Orthotists in low and middle-income countries.

Non Executive Director, North Staffordshire Medical Institute

- Governance responsibilities and help facilitate medical research in North Staffordshire.

President, International Research Society on Spinal Deformities

Chair, Footwear Biomechanics Group (Technical Group of the International Society of Biomechanics)

ORGANISATIONAL SKILLS

- Extensive experience in leading multidisciplinary teams, including the establishment and direction of a research centre with over 30 PhD researchers, senior academics, and international scholars, managing a budget exceeding £10 million over a decade.
- Proven ability to foster interdisciplinary collaboration across fields such as Clinical and Allied Health Professions, Engineering, Sports Sciences, and Law to address complex research challenges.
- Strong leadership in building international networks, exemplified by collaborations with institutions in Malta, Serbia, India, and Brazil, translating research into real-world impact.
- Successfully managed large-scale research projects, securing over £6 million in competitive funding from bodies like Innovate UK, the European Commission, and the British Council.
- Skilled in developing and overseeing postgraduate and CPD curricula, ensuring research-informed teaching and practitioner-focused outcomes.
- Organised and chaired international conferences and workshops, including a longstanding annual conference on clinical biomechanics and foot health, which has gained widespread support from academia, industry, and professional organisations.
- Comprehensive experience in strategic planning and policy development, contributing to initiatives such as the Allied Health Professions Telehealth Policy and the WHO-mandated Assistive Technology Survey.
- Adept at aligning organisational strategies with local and national priorities, leveraging partnerships with local governments, regional councils, and industry leaders to maximise societal and economic impact.

HONOURS AND AWARDS

1 JUL 2023 International Society of Biomechanics

Fellow

First UK-based researcher to receive this distinction for contributions to biomechanics and interdisciplinary research.

1 JUL 2015 Institute of Physics and Engineering in Medicine

Fellow

Recognition of professional achievements and contributions to clinical engineering and biomechanics.

1 JUL 2014 Higher Education Academy

Principal Fellow

Acknowledgement of excellence in academic leadership and research-informed teaching

1 JUN 2024 Royal College of Physicians and Surgeons of Glasgow

Honorary Fellow

Awarded for outstanding contributions to clinical biomechanics and allied health research.

1 SEP 2023 Royal College of Podiatry

Honorary Fellow

Recognised for advancing podiatric biomechanics and education globally.

1 SEP 2021

Freeman of the City of London

Recognition of professional achievements and contributions to engineering and biomechanics.

NETWORKS AND MEMBERSHIPS

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1. Fellow of the Institute for Physics and Engineering in Medicine.
2. Fellow of the International Society of Biomechanics.
3. Member of the International Research Society on Spinal Deformities
4. Member of the British Orthopaedic Foot and Ankle Society (British Orthopaedic Association).
5. Member of the Institution of Engineers (India).
6. Member of the Indian Society of Biomechanics.
7. Member of the Footwear Biomechanics Group (International Society of Biomechanics).
8. Member of the British Scoliosis Society.
9. Member of the International Society for Prosthetics and Orthotics.
10. Member of the Association of Biomedical Engineers, Medical Engineers and Bioengineers (UK).

PROJECTS

- **1 JUL 2024 – CURRENT**
Non-invasive assessment of the in vivo intervertebral disc stiffness and loading: a proof-of-concept study
- **1 JAN 2024 – CURRENT**
Non-invasive monitoring of intracranial pressure using ultrasound shear wave elastography: a proof-of-concept study
- **1 FEB 2023 – CURRENT**
Evidence-based guidelines for the optimal design of rigid ankle-foot orthosis
- **1 APR 2022 – 1 AUG 2023**
Establishing ecosystem for cutting edge research on diabetic foot ulceration
- **1 APR 2022 – 1 MAR 2023**
Mapping of the Prosthetic and Orthotic Profession for the 21st Century
- **1 APR 2022 – 1 MAR 2023**
UK prosthetic and orthotic workforce: Exploration of workforce data of currently registered Allied Health Professionals
- **1 JAN 2021 – 1 JUN 2021**
Measuring access to assistive technology using the WHO rapid Assistive Technology Assessment (rATA) questionnaire in the United Kingdom
- **1 NOV 2018 – 1 OCT 2019**
ViscoTurf - Preventing secondary diabetic foot ulceration
- **1 OCT 2018 – 1 OCT 2019**
Biomedical Catalyst 2018 Round 1 Feasibility
- **1 NOV 2018 – 1 OCT 2019**
How does curve type and magnitude affect locomotor function in adolescent females with scoliosis?
- **31 JUL 2018 – 31 DEC 2019**
3D perfusion mapping for diabetic foot ulcer assessment
- **1 JAN 2018 – 31 DEC 2021**
Smartphone Thermal ANALysis for Diabetic foot Ulcer Prevention and treatment
- **1 AUG 2017 – 1 SEP 2020**
Ultrasound based assessment of tissue biomechanics to enhance the clinical management of foot related pathologies
- **1 FEB 2017 – 30 JAN 2018**
ViscoTurf - Treatment of Diabetic Foot Ulceration

PUBLICATIONS

2025

Full List

I have an extensive publication record spanning over 830 scholarly outputs, reflecting my contributions to biomechanics, medical engineering, and allied health sciences. These include:

- **Peer-reviewed Articles:** Authored over 290 papers published in high-impact international journals.
- **Books:** Published three books that explore key topics in biomechanics, gait analysis, and assistive technology.
- **Book Chapters and Abstracts:** Contributed to over 100 chapters and published abstracts in renowned academic collections.
- **Conference Presentations:** Delivered over 190 peer-reviewed presentations at international conferences and over 60 invited or keynote lectures.

2024

Understanding occipital pressure sores in UK military casualties: a pilot study in healthy military personnel

2024

A flexible-spoke non-pneumatic tyre for manual wheelchairs

2024

Comparing reach distance between the Y-Balance Test-Lower Quarter and Star Excursion Balance Test: Are practitioners using the correct protocol?

CONFERENCES AND SEMINARS

Keynotes

I have delivered over 60 keynote and invited presentations at prestigious international conferences, workshops, and academic events. My talks span various topics in biomechanics, gait analysis, clinical practice, and interdisciplinary research. Selected keynotes include:

- **"From Lab to Life: Translating Biomechanics Research for Broad Impact"**, BASES 2024 Conference, Coventry, UK.
- **"Beyond Biomechanics: Integrating Clinical Insights and Interventional Realities in the Management of Adolescent Idiopathic Scoliosis"**, SCOSYM 2024, Split, Croatia.
- **"Exploring the Dynamics of Co-ordination and Availability: Keystones for Optimised Clinical Interventions in Gait Analysis"**, International Conference on Physiotherapy, Mysore, India, 2024.
- **"Bridging the Gap: Translating Biomechanics Research from Lab to Field for Practical Impact"**, EQOL 2024, Novi Sad, Serbia.
- **"Modelling, Models and Masterpieces: Translating Research into Clinical Practice"**, ISPO 19th World Congress, Guadalajara, Mexico, 2023.
- **"Gait and Pressure Analysis in the Management of Diabetic Foot Complications"**, Foot and Ankle Renaissance, Florence, Italy, 2022.

EXAMINING RESEARCH

As an external, I have examined **twenty-seven PhD's** (six at the University of Dundee, one at Exeter, one at Oxford Brooks University, three at the University of Central Lancashire, one at the University of Leeds, two at Roehampton, four at Salford, one at South Australia, one at Keele, two at Manchester Metropolitan University, one at London South Bank University, one student at Cardiff Metropolitan University, one at the University of Malta, One at Anglia Ruskin University, one at University College London, one **MD** (the University of Dundee, two **MPhil** (the University of Warwick and Keele University) to date and a large number of PG research dissertations and projects.

As an internal, I have examined nine MPhil candidates and have the experience of chairing numerous examination committees.

REPORTS (INTERNATIONAL, GOVERNMENTAL AND NON-GOVERNMENTAL AGENCIES)

- A research study to improve the rehabilitation of war-wounded soldiers undertaken by Staffordshire University was featured in a national report in the Parliament titled "Olympic and Paralympic Games: The impact of universities".
- Staffordshire University work on Diabetic Footwear was highlighted in the Annual Parliamentary Report on Assistive Technology Research and Development which was laid before parliament in July 2013. (<http://fast.isledev.co.uk/fastdocuments/S22%20Report%202012-13.pdf>)
- World Health Organisation: Standards for Prosthetics and Orthotics (<https://www.who.int/phi/implementation/assistive-technology/prosthetics-orthotics/en/>).
- World Health Organization & United Nations Children's Fund (UNICEF). (2022). Global report on assistive technology. World Health Organization. <https://apps.who.int/iris/handle/10665/354357>.
- Leone, E., Healy, A., Eddison, N., Royse, C. and Chockalingam, N., 2023. Policy brief: Framework to guide Allied Health Professional telehealth patient consultation guidelines and training. <https://www.researchsquare.com/article/rs-2442422/v1>
- Austin, V, Patel, D, Danemayer, J, Mattick, K, Landre, A, Smitova, M, Bandukda, M, Healy, A, Chockalingam, N, Bell D, and Holloway, C; Assistive Technology Changes Lives: an assessment of AT need and capacity in England; Cabinet Office, HMG; 2023
- Allied Health Professions Handbook of Profession-Specific Descriptors for Public Health. The Royal Society for Public Health (RSPH); 2023; <https://www.rsph.org.uk/our-work/resources/allied-health-professionals-hub/handbook-of-profession-specific-descriptors-for-public-health.html>
- Profile of the UK prosthetic and orthotic workforce and mapping of the workforce for the 21st century. Health Education England – British Association of Prosthetists and Orthotists. 2023. https://www.bapo.com/wp-content/uploads/2023/11/BAPO_Workforce_Mapping_Document_FINAL-TO-BE-RELEASED-6.11.23-compressed.pdf

INTELLECTUAL PROPERTY AND PATENTS

I am a named inventor in 7 patents and currently in the process of filing 2 more patents. I have co-invented a shock-absorbing system for ice-skates; a shear force-reducing system for footwear and a novel technique for tissue assessment.

1. Nachiappan Chockalingam; Das Bhabendranath; Dhahasekaran Thithalu Munusamy; Gopalkrishna Gautam; Parthasarathy Elliya; Ragavan Kondapuram Vijaya (1993) An improved footwear useful as an orthosis. IN186762B.
2. Nachiappan Chockalingam, Cheryl Blewitt and Timothy S Drew (2010) Blade member with shock absorber. GB2477725A.
3. R. Naemi, N. Chockalingam and P.E. Chatzistergos. Shear-reducing midsole. US10264849B2.
4. P.E. Chatzistergos, R. Naemi and N. Chockalingam. Improvements related to Ultrasound Imaging. EP3288464B1.
5. R. Naemi, P.E. Chatzistergos and N. Chockalingam. Articles for foot care. US20180168280A1.
6. P.E. Chatzistergos, R. Naemi and N. Chockalingam. Deformable structures. EP3558046A1.
7. P.E. Chatzistergos, R. Naemi and N. Chockalingam. In-Vivo Plantar Soft Tissue Assessment Technique. EP3288464B1.

I have also been involved in the development and design of two systems used within biomechanical assessment which have been protected for design.