Curriculum Vitae

Associate Professor Barry Doyle BEng PhD FIEAust

July 2021

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Associate Professor of Biomedical Engineering
Program Head – Cardiovascular Science & Diabetes
Head - Vascular Engineering Laboratory
http://vasclab.mech.uwa.edu.au

Harry Perkins Institute of Medical Research &
School of Engineering,
The University of Western Australia, M050,
Perth WA 6009, Australia.
Email: Barry.Doyle@uwa.edu.au
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DEGREES & QUALIFICATIONS

2009	**Doctor of Philosophy (PhD) in Biomedical Engineering** University of Limerick, Ireland.
2005	**Bachelor of Engineering (BEng) in Biomedical Engineering (1st Class Hons)** University of Limerick, Ireland.
2003	**National Diploma in Biomedical Engineering (with Distinction)** Cork Institute of Technology, Ireland.
2002	**National Certificate in Biomedical Engineering (with Distinction)** Cork Institute of Technology, Ireland.

APPOINTMENTS

Jan ’21-Present	**Program Head, Cardiovascular Science & Diabetes (CVS&D)** Harry Perkins Institute of Medical Research, Perth, Western Australia.
Dec ’19-Present	**Associate Professor** (Level D) School of Engineering, The University of Western Australia (UWA).
July ’21-Present	**Co-Founder & Executive Director** Navier Medical Ltd, Australia.
Sept ’18-Present	**Co-Founder & Chief Technology Officer** Flomatrix Pty Ltd, Australia.
Jan ’18-Jan ‘21	**Program Chair of Biomedical Engineering** School of Engineering, UWA.
May ’16-Present	**Lab Head - Vascular Engineering Laboratory** Harry Perkins Institute of Medical Research, Perth, Western Australia.
Jan ’15–Dec ‘19	**Senior Lecturer** (Level C) School of Engineering, UWA.
Jan ’15–Dec ‘18	**NHMRC RD Wright Biomedical Fellow**
Nov ’13–Dec ‘14	**Research Assistant Professor** (Level B) School of Mechanical & Chemical Engineering, UWA.
Dec '12–Nov’ 13	**UWA Postdoctoral Research Fellow** (Level A) School of Mechanical & Chemical Engineering, UWA.
Nov ’10–Present	**Honorary Fellow** BHF Centre for Cardiovascular Science, The University of Edinburgh, UK.
Jan ’12–Dec '12	**IRCSET-Marie Curie Research Fellow** Centre for Applied Biomedical Engineering Research (CABER), University of Limerick, Ireland.
Aug ’10–Dec '11	**IRCSET-Marie Curie Research Fellow** Centre for Cardiovascular Science, The University of Edinburgh, UK.
Jun ’09–Jun ‘10	**Postdoctoral Researcher** CABER, University of Limerick, Ireland.
Sept ’05–May ‘09	**PhD Postgraduate Researcher** CABER, University of Limerick, Ireland.

GRANTS & FUNDING RECEIVED

Total of over $11.3 million.

- Including competitive (e.g. NHMRC, ARC) and industry funding.

See Page 6 for full listing.

HONOURS, AWARDS & PRIZES

Received **55 honours, awards and prizes** to myself and my team. Most notably:

1. WA Innovator of the Year (finalist in two categories, 2021).
2. Perkins Academic of the Year (2021).
3. 1st Prize in the international Mimics Innovation Award (won three times: 2009, 2017, 2018).
4. Fellow of Engineers Australia (FIEAust) - by invitation (2017).
5. UWA Vice Chancellor's Research Award for Early Career Investigators (won three times: 2014, 2015, 2016).

See Page 8 for full listing.

PUBLICATIONS

Google Scholar Profile: http://scholar.google.com/citations?hl=en&user=yAZDxloAAAAJ

Citations = ~2550; h-index = 31; i10-index = 51; m-quotient = 2.7

	1st Author	Co-Author	Last Author	Total
Journal Articles	19	26	26	**71**
Books	1	-	-	**1**
Edited Books	2	3	1	**6**
Book Chapters	5	3	6	**14**
Conference Proceedings	55	32	52	**139**
Other Publications	2	-	1	**3**

Example recent journals:

Circulation (Q1, IF=29.7); JACC Imaging (Q1, IF=14.78); Arteriosclerosis, Thrombosis and Vascular Biology (Q1, IF=8.3); European Journal of Vascular and Endovascular Surgery (Q1, IF=7.1); Journal of Materials Chemistry B (Q1, IF=6.3); Artificial Intelligence in Medicine (Q1, IF=5.3); ACS Biomaterials Science and Engineering (Q1, IF=4.8); Journal of Vascular Surgery (Q1, IF=4.3).

See Page 11 for full listing.

INVITED TALKS & PRESENTATIONS

45 invited presentations. Most recent international talks with all expenses covered:

1. Biomechanical rupture potential index predicts rupture and need for repair in patients with AAA. Vienna Vascular Surgery Symposium, Vienna, Austria. June 27, 2019.
2. Biomechanical modelling and PET/CT in TBAD: Development of the Perth-Liege Risk Score, 6th International Meeting on Aortic Disease, Liege, Belgium, September 12-14, 2018. Biomechanical wall stress and rupture potential in AAA - Data from the MA^{3}RS Trial, 6th International Meeting on Aortic Disease, Liege, Belgium, September 12-14, 2018.
3. Does Patient-Specific Assessment of Wall Stress Predict Expansion or Rupture in Clinically-Relevant AAA? Data from the MA^{3}RS Study, 67th International Congress of the European Society of Cardiovascular and Endovascular Surgery, April 12-15, 2018. ***Keynote.***
4. PET/CT Imaging and Computational Biomechanics: Engineering Better Patient Outcomes in Type B Aortic Dissection, 67th International Congress of the European Society of Cardiovascular and Endovascular Surgery, April 12-15, 2018. ***Keynote.***

See Page 30 for full listing.

LEADERSHIP, EDITORIAL & PROFESSIONAL RESPONSIBILITIES *(selected)*

1. **Program Head** – Cardiovascular Science & Diabetes, Harry Perkins Institute (2021-present) Currently 8 research groups and >70 researchers.
2. **Lab Head** – Vascular Engineering Laboratory (VascLab) at the Perkins (est 2014 and relocated to the Harry Perkins Institute in 2016).
3. **Co-Founder** – UWA Biozone (www.biozone.uwa.edu.au).
4. **UWA Innovation Fellow** (2019) – one of 40 Fellows across UWA selected for their innovative approach to research and teaching.
5. **Editor** of teaching textbook on *'Cardiovascular Biomechanics'* (Springer, 2018). ***Downloaded >2 million times.***
6. **Editor** of the *'Computational Biomechanics for Medicine'* Springer book series (2013-2018).
7. **Chair** (Doyle, Miller, Joldes, Wittek – UWA; Nielson – Univ. Auckland) of the annual *MICCAI Workshop on Computational Biomechanics for Medicine* (2013-2018).
8. **Editorial Board member** of the *Journal of Endovascular Therapy*; *Medical Engineering & Physics; Bioprinting; European Journal of Vascular and Endovascular Surgery (2018-21)*.
9. **NHMRC Grant Review Panel Duties** - Assistant Chair – Project Grants (2016); Early Career Fellowships panel (2018); Investigator Grants panel (2019, 2021).
10. **Co-chair** of the 26th Annual Australasian Society for Biomaterials and Tissue Engineering (ASBTE) Meeting (2018).
11. **Active reviewer** for 33 leading clinical and engineering journals; promotion applications; external PhD and Masters theses submissions.
12. **Active grant assessor** for 10 national and international funding agencies.

See Page 33 for full listing.

SUPERVISION & MENTORING

Current:

- 1 Postdoc
- 7 PhDs (principal supervisor of 5)
- 1 Clinical Research Associate
- 2 Masters
- 3 Honours
- 2 Research Assistants

Previous:

- 5 Postdocs
- 5 PhD
- 2 Master of Eng
- 37 Master of Professional Eng
- 3 Master of Science
- 23 Honours

See Page 36 for full listing.

TEACHING & COURSE DEVELOPMENT *(at UWA)*

Master of Professional Engineering in Biomedical Engineering

- Designed and developed a 5 year teaching programme (3 year Engineering Science degree + 2 year Master degree).
- Approved in 2016; launched with first intake in 2017 (approx. 25 students).
- Programme Chair of BME since Jan 2018.

Transdisciplinary PhD Program

- Designed and developed a new 4 year PhD program that spans all faculties
- Approved in 2016; launched with first intake in 2018 (6 students with dedicated scholarships).

Teaching courses:

- **BMEG4003 – Cardiovascular Biomechanics:** Lecturer & Unit Coordinator (2020 – present).

- **ENSC3023 – Biomedical Engineering:** Lecturer & Unit Coordinator (2019 - present).
- **GENG4408 – Introduction to Biomedical Engineering:** Lecturer & Unit Coordinator (2016-18).
- **ENSC3001 – Mechanisms and Machines:** Lecturer & Unit Coordinator (2015).
- **GENG4405 – Numerical Methods and Modelling:** Tutor (2013-14).

MEDIA COVERAGE

TV Features: Channel 7 News, Melbourne; Southern Cross Nightly News; Channel 7 News, Brisbane; Channel 7 News, Perth; TEN Eyewitness News, Channel 10, Perth.

- **Total audience = 884,000**

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COMMERCIALISATION ACTIVITIES

Patents:

1. "Biocompatible polymer compositions" – PCT application #2020902509
2. "Catheter" – International Patent application #2019901780
    - Granted in Australia (June 2021)
3. "Methods and systems for detecting microcalcification" – Provisional patent application

Flomatrix Pty Ltd

- I am co-founder, Director and CTO of Flomatrix which was formed in 2018. We are commercialising a new IV cannula.
- We were accepted onto and successfully completed the MedTech Actuator program (largest MedTech accelerator program in the APAC region).
- We are a strong interdisciplinary team that merges biomedical engineering, clinical science, clinical practice and business. Including Prof Sam Keogh (ex-President of the Australian Vascular Access Society) is our advisor and KOL
- We have 2 patents – 1 patent filed in USA, Aus, Europe, China, Canada; 1 patent granted in Australia.

Navier Medical Ltd

- I am co-founder and Executive Director of Navier Medical which is a recently incorporated company that has spun out of UWA and the Perkins.
- Over the past 7 years I have led the development of a new Software as a Medical Device (SaMD) platform for better risk stratification of patients with acute coronary syndrome.
- We have secured seed funding and have a commercialisation plan in place.

ARC Centre for Personalised Therapeutics Technologies

- I am a Chief Investigator in this nationwide research centre (established in 2017) that consists of a large consortium of 5 universities, 3 research institutes and 17 industry partners.
- Collaboration with Orthocell Ltd (ASX: OCC) developing novel devices for a range of soft-hard tissue applications.
- Patent application at PCT stage describing a novel biomaterial we have developed.

GRANTS & FUNDING

Total of approximately $11,400,000

1. **W.L. Gore Cross-disciplinary Funding 2021 ($50,000)**
   CIA: Shirley Jansen; **CIB: Barry Doyle**

2. **Medical Health Research Infrastructure Fund 2020 ($18,000)**
   CIA: Barry Doyle

3. **UWA Pathfinder-Perkins Commercialisation Seed Funding ($150,000)**
   CIA: Barry Doyle

4. **NHMRC Ideas Grant 2020-2025 ($1,060,200)**
   CIA: Peter Noble; CIB: David Langton; CIC: Graham Donovan (Auckland); CID: Barry Cense; CIE: Francis Thein; CIF: Bruce Robinson; CIG: Siobhan Mulrennan; CIH: Tim Rosenow; AIA: Alan James; **AIB: Barry Doyle;** AIC: Gabrielle Musk; AID: John Blakey; AIE: John Elliot; AIF: Philip Robinson; AIG: Robert Bischof

5. **Medical Health Research Infrastructure Fund 2019 ($19,000)**
   CIA: Barry Doyle

6. **Industry funding – Flomatrix 2019 ($40,000)**
   CIA: Barry Doyle

7. **Royal Society: Catalyst Seeding 2019 ($75,000)**
   CIA: Jo James (Auckland); CIB: Caitlin Wyrwoll; CIC: Alys Clark (Auckland); **CID: Barry Doyle**

8. **UHU Collaborative Network Seed Funding 2019 ($15,000)**
   CIA: Rod Dilley; CIB: Richard Day (UCL); **CIC: Barry Doyle;** CID: Pritinder Kaur (Curtin); CIE: Huna Ting Ong

9. **ARC Industrial Transformation Training Centre 2018-2023 ($~3.5 million)**
   Centre for Personalised Therapeutics Technologies
   UWA CIs: Kevin Pfleger, **Barry Doyle**, Brendan Kennedy, Tim Sercombe, Minghao Zheng, Jenny Rodger, et al.

10. **Abbott Australasia 2018 ($902,100)**
    PUFFbALL Study – coronary plaque features and function improve risk stratification
    CIA: Carl Schultz; **CIB: Barry Doyle**

11. **Medical Health Research Infrastructure Fund 2018 ($16,400)**
    CIA: Barry Doyle

12. **Department of Health Merit Award 2017 ($37,500)**
    CIA: Barry Doyle

13. **UWA Near Miss Award 2017 ($20,000)**
    CIA: Paul Norman; **CIB: Barry Doyle**

14. **ANZSVS Vascular Foundation 2017 ($37,500)**
    CIA: Paul Norman; **CIB: Barry Doyle**

15. **UWA Education Futures Scholarship Program Grant Funding ($9,987)**
CIs: Kara Yopak, Jenny Rodger, Melinda Fitzgerald, Shaun Collin, **Barry Doyle**, Tim Sercombe.

16. **UWA Research Collaboration Award 2015 ($19,200)**
CIA: Barry Doyle; CIB: Grand Joldes; with Peter Hoskins (The University of Edinburgh, UK).

17. **New Investigator Research Infrastructure Support (2015) ($10,000)**

18. **Medical Research Foundation 2015 ($150,000)**
CIA Carl Schultz; **CIB Barry Doyle**; CIC Eric Moses; CID Roslyn Francis

19. **UWA DVC-R Fellowship Support 2015-2017 ($60,000)**
CIA: Barry Doyle

20. **NHMRC Career Development Fellowship 2015-2018 ($411,768)**
CIA: Barry Doyle

21. **UWA Research Collaboration Award 2014 ($19,200)**
CIA: Barry Doyle; CIB: Grand Joldes; with Janet Powell (Imperial College London, UK).

22. **NHMRC Project Grant 2014-2017 ($411,148)**
CIA: Barry Doyle; CIB: David Newby; CIC: Peter Hoskins; CID: Karol Miller.

23. **UWA Research Collaboration Award 2013 ($19,750)**
CIA: Grand Joldes; **CIB: Barry Doyle;** with Ron Kikinis (Harvard Medical School, USA) and Gabor Fichtinger (Queen's University, Canada).

24. **UWA ECM Research Development Grant 2013 ($15,830)**
CIA: Barry Doyle; CIB: Paul Norman; with Janet Powell (Imperial College London) and Tim McGloughlin (KAUST, UAE).

25. **UWA Postdoctoral Research Fellowship 2012-2015 ($353,624)**
CIA: Barry Doyle

26. **Medical Research Council UK - Efficacy and Mechanism Evaluation (EME) 2012-2016 (~$3,620,000)**
CIs: David Newby, Peter Hoskins, **Barry Doyle,** et al.

27. **IRCSET/Marie Curie Research Fellowship 2010-2013 (~$259,000)**
CIA: Barry Doyle

28. **IRCSET EMBARK Postgraduate Scholarship 2005-2009 (~$120,000)**
CIA: Barry Doyle

HONOURS, AWARDS & PRIZES TO VASCLAB

1. **WA Innovator of the Year (2021)**
    - Finalist in two categories:
        - Emerging Innovation
        - Wesfarmers Wellbeing Platinum

2. **Perkins Academic of the Year (2021)**

3. **Barry Marshall and Robin Warren Postgraduate Research Travel Award (2020) ($1,500)** – awarded to Behzad Shiroud Heidari.

4. **APR Internship (2020) ($15,000)** – awarded to Nik Bappoo (Academic Mentor Barry Doyle) in collaboration with Vital Trace Pty Ltd.

5. **Forrest PhD Scholarship (2020) ($150,000)** - awarded to Harrison Caddy.

6. **William and Marlene Schrader Biomedical PhD Scholarship 2020 ($90,000)** – awarded to James Mann.

7. **Perkins Vacation Scholarship (2020)** - awarded to Georgia Khinsoe.

8. **Perkins Vacation Scholarship (2020)** - awarded to Arjun Balaji.

9. **Winner – Shark Tank, ANZ Society for Vascular Surgery Annual Scientific Meeting (2019) ($2,000) –** awarded to Louis Parker.

10. **Awarded cover image of Arteriosclerosis, Thrombosis and Vascular Biology (2019)**

11. **William and Marlene Schrader Prize for Best Biomedical Engineering Thesis (2019) ($1,500)** – awarded to Usaid Rana.

12. **WA Dept. of Jobs, Tourism, Science and Innovation Science-Industry PhD Fellowship (2019) ($30,000)** – awarded to Behzad Shiroud Heidari.

13. **UWA Innovation Fellow (2019)** – one of 40 people at UWA recognised for their innovative work.

14. **1st Prize in international Mimics Innovation Award (2018) ($5500 prize)** – awarded to Louis Parker.
    Parker LP, Kelsey LJ, Powell JT, Koncar I, Sakalihasan N, Jansen S, Norman PE and **Doyle BJ**. Computational modelling to evaluate intervention strategies for a complex case of aortic disease.

15. **2nd Prize in ASME SB3C BS Student Paper Award (2018)** – awarded to Nik Bappoo.
    Bappoo N, Evans A, Kelsey LJ, Parker LP, Tongpob Y, Moran CS, Thomson A, Holmes MC, Wyrwoll CS and **Doyle BJ**. Haemodynamics in the feto-placental vasculature of healthy and intrauterine growth restricted fetuses.

16. **Finalist in ASME SB3C MS Student Paper Award (2018)** – awarded to Harrison Caddy.
    Caddy H, Kelsey LJ, Parker LP, Mallal J, Newby DE, Dweck MR and **Doyle BJ**. Haemodynamics in the thoracic aorta of patients with aortic valve disease.

17. **2nd Prize in ASME SB3C BS Student Paper Award (2018)** – awarded to Joe Rebhan.

Rebhan J, Parker LP, Kelsey LJ and **Doyle BJ**. Haemodynamics and tissue stresses in healthy and diseased retinas: a 3D fluid-structure interaction framework.

18. **2nd Prize in ASME SB3C BS Student Paper Award (2018)** – awarded to Brendon Lim.
Lim B, Parker LP, Kelsey LJ, Powell JT, Norman PE and **Doyle BJ**. Towards a better understanding of isolated common iliac artery aneurysm: a computational haemodynamics study.

19. **1st Prize: Mimics Innovation Award (2017) ($5500 prize)** – awarded to Nik Bappoo.
Bappoo N, Evans A, Kelsey LJ, Parker LP, Tongpob Y, Moran CS, Thomson A, Holmes MC, Wyrwoll CS and **Doyle BJ**. Viscosity and haemodynamics in the feto-placental vasculature.

20. **Fellow of Engineers Australia (2017) -** invited to Fellow grade.

21. **UWA Vice Chancellor's Research Award for Early Career Investigators (2016) -** includes a $1,500 award. Won for the third year running.

22. **Science Pathways 2016: Future Leaders -** Travel Award. EMCR Forum, Australian Academy of Science.

23. **Awarded cover image of Annals of Biomedical Engineering (2016)**

24. **UWA ECM Teaching Excellence Award (2016)** - nomination

25. **William and Marlene Schrader Biomedical Scholarship (2015) ($90,000)** – awarded to Louis Parker.

26. **UWA Vice Chancellor's Research Award for Early Career Investigators (2015) -** includes a $1,500 award. Won for the second year running.

27. **UWA Research Collaboration Award (2015) -** with The University of Edinburgh.

28. **University Club of WA PhD Travel Award (2015) ($5,000)** – awarded to Lachlan Kelsey.

29. **New Investigator Research Infrastructure Support (NIRIS) Award (2015) -** includes a $10,000 research support award.

30. **UWA Vice Chancellor's Research Award for Early Career Investigators (2014) -** includes a $1,500 award.

31. **NHMRC Career Development Fellowship (2014) –** the only CDF Level 1 awarded to WA and one of two awarded to engineers nationally. 4yr Fellowship.

32. **UWA Research Collaboration Award (2014) -** with Imperial College London.

33. **Computational Biomechanics for Medicine Award (2014) ($15,000)** – awarded to Lachlan Kelsey.

34. **Certificate of Excellence in Reviewing (2014)**
Awarded by Medical Engineering & Physics (Elsevier) – one of 25 awards worldwide.

35. **UWA ECM Research Development Award (2013) -** with Imperial College London and KUSTAR.

36. **UWA Research Collaboration Award (2013) -** with Harvard Medical School and Queen's University, Canada.

37. **1st Prize – Why My Research Matters. Irish Research Council Annual Symposium 2013 (€1,000) –** awarded to Siobhan O'Leary.
O'Leary, S., E. Kavanagh, P. Grace, T.M. McGloughlin and **B.J. Doyle**, Einstein's Silent Killer. Irish Research Council Annual Symposium 2013, Dublin, Ireland, September 14, 2013.

38. **Research Postgraduate Residential Scholarship 2013 (€7,000) –** awarded to Siobhan O'Leary

39. **1st Prize – 21st Sylvester O'Halloran Surgical Scientific Meeting 2013 (€750) –** awarded to Siobhan O'Leary.
O'Leary, S., E. Kavanagh, P. Grace, **B.J. Doyle** and T.M. McGloughlin, Determining Patient-Specific Mechanical Properties of Intraluminal Thrombus by Examining Two Modes of Deformation. 21st Sylvester O'Halloran Surgical Scientific Meeting, Ireland, March, 2013.

40. **2nd Prize (Best Poster) - Sir Bernard Crossland Symposium 2013 –** awarded to Siobhan O'Leary.
O'Leary, S., E. Kavanagh, P. Grace, **B.J. Doyle** and T.M. McGloughlin, Determining Patient-Specific Mechanical Properties of Intraluminal Thrombus. Sir Bernard Crossland Symposium, Trinity College Dublin, April 10-11, 2013.

41. **Awarded University of Western Australia Postdoctoral Research Fellowship (2012)**

42. **Irish Research Council 'New Foundations' Award 2012 (€6,500)** – awarded to Siobhan O'Leary. Principal Investigator and Mentor: **Barry Doyle.** Collaborating with Prof. Joy Roy, Karolinska Institute (#47 ARWU), Sweden.

43. **Honorary Fellow of The University of Edinburgh (2010)**

44. **Awarded IRCSET/Marie Curie Research Fellowship (2010)**

45. **1st Prize: Irish Association of Vascular Surgeons Meeting - Best Research Paper (2010)**
Irish Association of Vascular Surgeons Research Meeting 2010.

46. **Finalist in 4th Level Venture Programme (2010)**
Short-listed to final six as part of the 4th Level Venture Programme (with Dr. Anthony Callanan).

47. **Awarded cover image of Arteriosclerosis, Thrombosis and Vascular Biology (2010)**

48. **Finalist in Sylvester O'Halloran Surgical Scientific Meeting Prize (2010)**
Sylvester O'Halloran Surgical Scientific Meeting 2010.
Irish Journal of Medical Science, 2010:179(1);S18.

49. **1st Prize: Mimics Innovation Award (2009) (€5000 prize)**
Mimics Innovation Awards, 2009.

50. **Semi-Finalist in ASME SBC PhD Student Paper Award (2009)**
ASME Summer Bioengineering Conference 2009.

51. **Finalist in Sylvester O'Halloran Surgical Scientific Meeting Prize (2009)**
Sylvester O'Halloran Surgical Scientific Meeting 2009.
Irish Journal of Medical Science, 2009:178(2);S50.

52. **3rd place: ASME SBC Best PhD Student Paper Award (2008)**
ASME Summer Bioengineering Conference 2008.

53. **Finalist in Mimics Innovation Award (2008)**
Mimics Innovation Awards 2008.

54. **2nd prize in Engineers Ireland Biomedical Research Medal (2008)**
Royal College of Surgeons Ireland, Dublin, Ireland, May 19th, 2008.

55. **IRCSET EMBARK Postgraduate Scholarship (2005)**

FULL PUBLICATION LIST

Students and postdocs under my supervision are underlined (only in major publications).

BOOKS

1. **Doyle, B.J.,** D.S. Molony, M.T. Walsh and T.M. McGloughlin, Abdominal Aortic Aneurysms: New Approaches to Rupture Risk Assessment, Nova Science Publishers 2010, NY, USA. ISBN:978-1-61668-312-2.

EDITED BOOKS

1. Nielson, P.M.F., Wittek, A., K. Miller, **B.J. Doyle,** G.R. Joldes and M.P. Nash (Eds). Computational Biomechanics for Medicine: Measurements, Models and Predictions (9th vol), Springer, 2018. ISBN: 978-3-319-75588-5.

2. Hoskins, P.R., P.V. Lawford and **B.J. Doyle** (Eds). Cardiovascular Biomechanics. Springer, 2017. ISBN: 978-3-319-4605-3. ***Over 2 million downloads.***

3. Wittek, A., G.R. Joldes, P.M.F. Nielson, **B.J. Doyle** and K. Miller (Eds). Computational Biomechanics for Medicine: From Algorithms to Models to Applications (8th vol), Springer, 2017. ISBN: 978-3-319-54481-6.

4. Joldes, G.R., **B.J. Doyle**, A. Wittek, K. Miller and P.M.F. Nielson (Eds). Computational Biomechanics for Medicine: Imaging, Modelling and Computing (7th vol), Springer, 2016. ISBN: 978-3-319-28327-2.

5. **Doyle, B.J.,** K. Miller, A. Wittek and P.M.F. Nielson (Eds). Computational Biomechanics for Medicine: New Approaches and New Applications (6th vol), Springer, 2015. ISBN:978-3-319-15502-9.

6. **Doyle, B.J.,** K. Miller, A. Wittek and P.M.F. Nielson (Eds). Computational Biomechanics for Medicine: Fundamental Science and Patient-Specific Applications (5th vol), Springer, 2014. ISBN:978-1-4939-0744-1.

BOOK CHAPTERS

1. Parker, L.P., L.J. Kelsey, J. Mallal, R. Hustinx, N. Sakalihasan, P.E. Norman and **B.J. Doyle**, Simulating platelet transport in Type-B aortic dissection, In: Nielson, P.M.F., A. Wittek, K. Miller, B.J. Doyle, G.R. Joldes, and M.R. Nash (Eds). Computational Biomechanics for Medicine: Measurements, Models, and Predictions (9th vol), Springer NY, 2018. ISBN: 978-3-319-75589-2.

2. Hose, R. and **B.J. Doyle**, Modelling of the Cardiovascular System, In: Hoskins, P.R., P.V. Lawford and B.J. Doyle (Eds). Cardiovascular Biomechanics, Springer, 2017, ch.10, pp.193-206. ISBN: 978-3-319-4605-3.

3. Hoskins, P.R., N. Conlisk, A. Geers and **B.J. Doyle**, Patient-Specific Modelling, In: Hoskins, P.R., P.V. Lawford and B.J. Doyle (Eds). Cardiovascular Biomechanics, Springer, 2017, ch.11, pp.207-231. ISBN: 978-3-319-4605-3.

4. **Doyle, B.J.**, R. Macrae and P.R. Hoskins, Measurement of the Mechanical Properties of Biological Tissues, In: Hoskins, P.R., P.V. Lawford and B.J. Doyle (Eds). Cardiovascular Biomechanics, Springer, 2017, ch.13, pp.255-270. ISBN: 978-3-319-4605-3.

5. **Doyle, B.J.** and P.R. Hoskins, Aneurysms, In: Hoskins, P.R., P.V. Lawford and B.J. Doyle (Eds). Cardiovascular Biomechanics, Springer, 2017, ch.16, pp.307-330. ISBN: 978-3-319-4605-3.

6. Macrae, R., J. Pillow, K. Miller and **B.J. Doyle**, Constitutive Modelling of Lamb Aorta, In: Wittek, A., G.R. Joldes, P.M.F. Nielson, B.J. Doyle and K. Miller (Eds). Computational Biomechanics for Medicine (8th vol), Springer, 2017, pp.15-25.

7. Kelsey, L.J., C. Schultz, K. Miller and **B.J. Doyle**, The Effects of Geometric Variation from OCT-derived 3D Reconstructions on Wall Shear Stress in a Patient-Specific Coronary Artery, In: Wittek, A., G.R. Joldes, P.M.F. Nielson, B.J. Doyle and K. Miller (Eds). Computational Biomechanics for Medicine (8th vol), Springer NY, 2017, pp.1-13.

8. Kristen, A., L. Kelsey, A. Wintermantel and **B.J. Doyle**, Fundus Image Based Blood Flow Simulation of the Retinal Arteries, In: Joldes, G.R., B.J. Doyle, A. Wittek, K. Miller and P.M.F. Nielson (Eds). Computational Biomechanics for Medicine: Imaging, Modelling and Computing (7th vol), Springer NY, 2016. ISBN: 978-3-319-28327-2.

9. Joldes, G.R., A.L. Lanzara, A. Wittek, **B.J. Doyle** and K. Miller, Traumatic Brain Injury: An Investigation Into Shear Waves Interference Effects, In: Joldes, G.R., B.J. Doyle, A. Wittek, K. Miller and P.M.F. Nielson (Eds). *Computational Biomechanics for Medicine: Imaging, Modelling and Computing* (7th vol), Springer NY, 2016. ISBN: 978-3-319-28327-2.

10. Sinclair, M., A. Wittek, **B.J. Doyle**, K. Miller and G.R. Joldes, Modeling the Diffuse Axonal Injury in Primary Phase Blast-Induced Brain Injury, In: Joldes, G.R., B.J. Doyle, A. Wittek, K. Miller and P.M.F. Nielson (Eds). Computational Biomechanics for Medicine: Imaging, Modelling and Computing (7th vol), Springer NY, 2016. ISBN: 978-3-319-28327-2.

11. Chowdhury, H.A., G.R. Joldes, A. Wittek, **B.J. Doyle,** E. Pasternak and K. Miller, Implementation of a Modified Moving Least Squares Approximation for Predicting Soft Tissue Deformation using a Meshless Method, In: Doyle, B.J., K. Miller, A. Wittek and P.M.F. Nielson (Ed's). *Computational Biomechanics for Medicine: New Approaches and New Applications* (6th vol), Springer NY, 2015. ISBN:978-3-319-15502-9.

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118. **Doyle, B.J.,** A.J. Cloonan, M.T. Walsh, D.A. Vorp and T.M. McGloughlin, Identification Of Rupture Locations In Patient-Specific Abdominal Aortic Aneurysms, The Biomedical Engineering Society, BMES 2009 Annual Fall Meeting, Pittsburgh, USA, October 7-10, 2009.

119. **Doyle, B.J.,** A. Callanan, M.T. Walsh and T.M. McGloughlin, Influence of Asymmetry and Resulting Inflection on Peak Wall Stress in Abdominal Aortic Aneurysms, World Congress of Medical Engineering and Physics 2009, Munich, Germany, Sept 7-12, 2009. *IFMBE Proceedings,* 2009;25(4):880-883.

120. **Doyle, B.J.,** T.J. Corbett, D.A. Vorp and T.M. McGloughlin, Design and Development of Silicone Rubbers for Use in the Experimental Modelling of Abdominal Aortic Aneurysms, Proceedings of the ASME 2009 Summer Bioengineering Conference (SBC2009), Lake Tahoe, California, USA, June 17-21, 2009. pp. 961-962.

121. Corbett, T.J., **B.J. Doyle**, A. Callanan, and T.M. McGloughlin, The Development of Physiological Compliant AAA Models For In Vitro Flow Studies, Proceedings of the ASME 2009 Summer Bioengineering Conference (SBC2009), Lake Tahoe, California, USA, June 17-21, 2009. pp. 11-12.

122. **Doyle, B.J.,** A. Callanan, T.J. Corbett, D.A. Vorp and T.M. McGloughlin, In Vitro Modelling of an Abdominal Aortic Aneurysm to Determine Rupture Locations, 18th Sylvester O'Halloran Surgical Scientific Meeting, Limerick, Ireland, March 6-7, 2009. *Irish Journal of Medical Science*, 2009:178(2);S50.

123. **Doyle, B.J.,** T.J. Corbett, M.R. O'Donnell, D.A. Vorp and T.M. McGloughlin, Design and Development of a Range of Silicone Elastomers for Use in Experimental Studies, Bioengineering… in Ireland 15; Proceedings of the Fifteenth Annual of the Section of Bioengineering of the Royal Academy of Medicine in Ireland, Limerick, Ireland, January 30-31, 2009.

124. **Doyle, B.J.,** A. Callanan, P.A. Grace and T.M. McGloughlin, A Finite Element Analysis Rupture Index (FEARI) as an Additional Tool in Abdominal Aortic Aneurysm Assessment, Bioengineering '08, Imperial College, London, England, Sept 18-19th 2008.

125. **Doyle, B.J.,** A. Callanan, T.J. Corbett, A.J. Cloonan, M.R. O'Donnell, D.A. Vorp and T.M. McGloughlin, The Use of Silicone Materials to Model Abdominal Aortic Aneurysm Behaviour, *Society of Plastics Engineers, SPE European Conference on Medical Polymers*, Belfast, Sept 3-5th 2008, p.115-120.

126. **Doyle, B.J.,** A. Callanan, P.A. Grace, D.A. Vorp, and T.M. McGloughlin, Vessel Asymmetry as an Additional Tool for Aneurysm Rupture Risk, 16th Congress of the European Society of Biomechanics, Lucerne, Switzerland, July 6-9, 2008. *Journal of Biomechanics*, 2008:41(1);S11.

127. Molony, D., A. Callanan, **B. Doyle,** M. Walsh and T. McGloughlin, Influence of Modelling Parameters on Abdominal Aortic Aneurysm Stent-Grafts, 16th Congress of the European Society of Biomechanics, Lucerne, Switzerland, July 6-9, 2008. *Journal of Biomechanics,* 2008:41(1);S395.

128. **Doyle, B.J.,** A. Callanan, M.T. Walsh, D.A. Vorp, and T.M. McGloughlin, Assessment of Abdominal Aortic Aneurysm Risk – Asymmetry as an Additional Diagnostic Tool, Proceedings of the ASME 2008 Summer Bioengineering Conference (SBC2008), Florida, USA, June 26-29, 2008. pp. 811-812.

129. Molony, D.S., A. Callanan, **B.J. Doyle,** L.G. Morris, M.T. Walsh and T.M. McGloughlin, Affect of Abdominal Aortic Aneurysm Stent-Graft Design on Arterial Haemodynamics, Proceedings of the ASME 2008 Summer Bioengineering Conference (SBC2008), Florida, USA, June 26-29, 2008. pp. 435-436.

130. **Doyle, B.J.,** A. Callanan, P.A. Grace, D.A. Vorp, and T.M. McGloughlin, The Use of an Asymmetry Parameter as an Additional Tool for Abdominal Aortic Aneurysm Rupture Risk, 17th Sylvester O'Halloran Surgical Scientific Meeting, Limerick, Ireland, February 29- March 1, 2008. *Irish Journal of Medical Science*, 2008:177(1);S21.

131. **Doyle, B.J.,** A. Callanan, P.E. Burke, P.A. Grace, M.T. Walsh, D.A. Vorp, and T.M. McGloughlin, Vessel Asymmetry as an Additional Tool for Rupture Prediction of Abdominal Aortic Aneurysms, Proceedings of the Fourteenth Annual of the Section of Bioengineering of the Royal Academy of Medicine in Ireland. Sligo, Ireland, January 25-26, 2008.

132. **Doyle, B.J.,** A. Cloonan, A. Callanan, D.A. Vorp, and T.M. McGloughlin, Development of a New Pseudomaterial for Rupture Studies of Abdominal Aortic Aneurysms, Proceedings of the Fourteenth Annual of the Section of Bioengineering of the Royal Academy of Medicine in Ireland. Sligo, Ireland, January 25-26, 2008.

133. **Doyle, B.J.,** A. Callanan, D. A. Vorp and T.M. McGloughlin, A Finite Element Analysis Rupture Index (FEARI): An Additional Tool for Abdominal Aortic Aneurysm Burst Prediction? The Biomedical Engineering Society, BMES 2007 Annual Fall Meeting, LA, California, USA, September 26-29, 2007.

134. **Doyle, B.J.,** A. Callanan, D. A. Vorp and T.M. McGloughlin, A Finite Element Analysis Rupture Index (FEARI) as an Additional Tool for Abdominal Aortic Aneurysm Burst Prediction, European Society of Biomechanics Workshop 2007, Finite Element Modelling in Biomechanics and Mechanobiology, Dublin, Ireland. August 26-28, 2007.

135. Molony, D.S., **B.J. Doyle,** A. Callanan, L.G. Morris, M.T. Walsh and T.M. McGloughlin, A Computational Investigation of Blood Flow in Realistic AAA Stent-Grafts, Proceedings of the ASME 2007 Summer Bioengineering Conference (SBC2007), Colorado, USA, June 20-24, 2007. pp. 497-498.

136. **Doyle, B.J.,** L.G. Morris, A. Callanan, P. Kelly, D. A. Vorp and T.M. McGloughlin, 3D Reconstruction of Patient-Specific Abdominal Aortic Aneurysms: From CT Scan to Silicone Model, Proceedings of the ASME 2007 Summer Bioengineering Conference (SBC2007), Colorado, USA, June 20-24, 2007. pp. 563-564.

137. **Doyle, B.J.,** L.G. Morris, P. Kelly, D. A. Vorp and T.M. McGloughlin, 3D Reconstruction of Patient-Specific Abdominal Aortic Aneurysms: From CT Scan to Silicone Model, Sir Bernard Crossland Symposium, Galway, Ireland, March 28-29, 2007.

138. **Doyle, B.J.,** L.G. Morris, P. Kelly, D. A. Vorp and T.M. McGloughlin, 3D Reconstruction of Patient-Specific Abdominal Aortic Aneurysms: From CT Scan to Silicone Model, Proceedings of the Thirteenth Annual of the Section of Bioengineering of the Royal Academy of Medicine in Ireland. Enniskillen, Northern Ireland, January 29-30, 2007.

139. **Doyle, B.J.,** A. Callanan, L.G. Morris, T.M. McGloughlin, P. O'Donnell and P. Delassus, Comparison of the Photoelastic Method and the Finite Element Method to Predict the Stress Concentrations on an Abdominal Aortic Aneurysm Model, Proceedings of the Twelfth Annual of the Section of Bioengineering of the Royal Academy of Medicine in Ireland. Galway, Ireland, January 27-28, 2006

OTHER PUBLICATIONS

1. Parker, L.P., L.J. Kelsey, N. Sakalihasan, J.T. Powell, I. Koncar, S. Jansen, P.E. Norman and **B.J. Doyle**, Computational Modelling to Evaluate Intervention Strategies for a Complex Case of Aortic Disease. Mimics Innovation Award 2018.
2. **Doyle, B.J.** and T.M McGloughlin, Towards an Improvement in Aneurysm Assessment: Coupling 3D Reconstruction Tools with Engineering Know-How. Mimics Innovation Award 2010, available at http://hdl.handle.net/10344/215. 27 pages.
3. **Doyle, B.J.,** Rupture Behaviour of Abdominal Aortic Aneurysms: An Experimental and Computational Investigation. PhD Thesis, University of Limerick, Ireland, 2009, available at http://ulir.ul.ie/handle/10344/216.

INVITED TALKS, PRESENTATIONS & SEMINARS

1. Computer Modelling in Vascular Surgery. WL Gore. Evening of Clinical Discussion, Perth, Australia.

2. Bioprinting soft and hard tissue interfaces. 5th Annual 3D Med Australia Conference, Melbourne, Australia, Nov 14-16, 2019.

3. Multimodal imaging and computer modelling of coronary artery disease. WA Bioinnovation Symposium, Perth, Australia, Oct 17-18, 2019.

4. Biomechanical rupture potential index predicts rupture and need for repair in patients with AAA. Vienna Vascular Surgery Symposium, Vienna, Austria. June 27, 2019. ***Expenses paid.***

5. Biomedical Engineering and the Perth Ecosystem. Biomedical Engineering Society: Innovation in Medicine Event, Perth, Australia, Oct 15, 2018.

6. 3D bioprinting with hydrogels, *2018* Australia Symposium of International *Chinese Musculoskeletal* Research Society (ICMRS), Perth, Australia. October 10, 2018.

7. Biomechanical modelling and PET/CT in TBAD: Development of the Perth-Liege Risk Score, 6th International Meeting on Aortic Disease (IMAD 6), Liege, Belgium, September 12-14, 2018. ***Expenses paid.***

8. Biomechanical wall stress and rupture potential in AAA - Data from the MA^{3}RS Trial, 6th International Meeting on Aortic Disease (IMAD 6), Liege, Belgium, September 12-14, 2018. ***Expenses paid.***

9. Does Patient-Specific Assessment of Wall Stress Predict Expansion or Rupture in Clinically-Relevant AAA? Data from the MA^{3}RS Study, 67th International Congress of the European Society of Cardiovascular and Endovascular Surgery, Strasbourg, France, April 12-15, 2018. **Keynote - *Expenses paid.***

10. PET/CT Imaging and Computational Biomechanics: Engineering Better Patient Outcomes in Type B Aortic Dissection, 67th International Congress of the European Society of Cardiovascular and Endovascular Surgery, Strasbourg, France, April 12-15, 2018. **Keynote - *Expenses paid.***

11. Computational Biomechanics of the Retina, Lions Eye Institute Colloquium, Perth, Australia, Jan 31, 2018.

12. Cardiovascular Biomechanics in Health and Disease, Computational Modelling in Health and Disease Symposium, Harry Perkins Institute of Medical Research, November 21, 2017.

13. Predicting Complications in Type B Aortic Dissection with Biomechanical Modelling, ANZ Society of Vascular Surgery Annual Scientific Meeting, October 13-15, 2017.

14. Functional Aspects of High Risk Plaque: New Information from Computational Modelling of the MOTIVATOR Study, Cardiology Society of ANZ Annual Scientific Meeting, August 11-13, 2017.

15. Viscosity and haemodynamics in a late gestation rat feto-placental arterial network. IFPA Placenta Biophysics Workshop, Manchester, UK. August 29-20, 2017.

16. Computational haemodynamics: Opportunities in Opthalmology, Inter-hospital Opthalmological Clinical Meeting, Harry Perkins Institute of Medical Research, March 10, 2017.

17. Biomedical Engineering at UWA, Hearts & Minds, The 2016 Winthrop High Society Annual Event, December 12, 2016.

18. Cardiovascular Biomechanics in Health and Disease, Joint 6th Margaret River Region Forum and 9th ASSCR Annual Scientific Meeting, Margaret River, Australia, December 4-7, 2016.

19. Computational modelling of Type B aortic dissection: Can it help manage patients? 5th International Meeting on Aortic Disease (IMAD 5), Liege, Belgium, September 15-17, 2016. ***Expenses paid.***

20. Where and why does thrombus develop in large arteries? 5th International Meeting on Aortic Disease (IMAD 5), Liege, Belgium, September 15-17, 2016. ***Expenses paid.***

21. Engineering Better Outcomes for Patients with Cardiovascular Disease, Australasian College of Physical Science and Engineering in Medicine (ACPSEM) WA Branch Annual Scientific Meeting, September 3, 2016.

22. Biomedical Engineering for Heart Disease, Perkins Open Day, Harry Perkins Institute of Medical Research, August 27, 2016.

23. Vascular Engineering to Improve Health and Well-Being, Stand Together for Safety, Woodside Energy Ltd., Perth, Australia, August 23, 2016.

24. Vascular Engineering @ Perkins, Perkins Seminar Series, Harry Perkins Institute of Medical Research, July 21, 2016.

25. Patient-Specific Modelling of Vascular Disease, Science on the Swan Conference 2016: Cutting Edge, Perth, Australia, May 3-5, 2016.

26. Engineering Better Outcomes in Cardiovascular Disease, Retired Engineers Australia Special Presentation, Harry Perkins Institute of Medical Research, April 27, 2016.

27. Iliac Artery Aneurysms: Clinical and Biomechanical Insights, 4th IEEE International Conference on Bioinformatics and Biomedical Engineering, Belgrade, Serbia, Nov 2-4, 2015. ***Expenses paid.***

28. Aneurysm Rupture Prediction with Patient-Specific Modelling, Royal Australasian College of Surgeons (RACS) Scientific Congress, Perth, May 4-8, 2015. ***Expenses paid.***

29. Vascular Engineering at UWA, School of Anatomy, Physiology and Human Biology Seminar Series, The University of Western Australia, Australia, April 21 2015.

30. 3D Bioprinting at UWA, Centre for Cell Therapy and Regenerative Medicine Symposium, Curtin University, Perth, Australia, April 17 2015.

31. Vascular Engineering at UWA: Research and Collaboration Opportunities, Sir Charles Gairdner Hospital Meeting, Perth, November 13, 2014.

32. Uniting patient-specific biomechanics with functional imaging: Potentially new insights into vascular disease with the Mimics Innovation Suite, Mimics Innovation Conference, Leuven, Belgium, October 20-21, 2014. ***Expenses paid.***

33. Predicting Rupture Risk Using Patient-Specific Modelling, Australian and New Zealand Society for Vascular Surgery (ANZSVS), Canberra, Australia, October 11-13, 2014. ***Expenses paid.***

34. Vascular Engineering at UWA, Queen's University, Kingston, Canada, September 10, 2014.

35. Abdominal Aortic Aneurysm Rupture Prediction Using FEA, 7th World Congress of Biomechanics, Boston, July 6-11, 2014.

36. Patient-Specific Modelling of Aortic Disease, School of Mechanical and Chemical Engineering Seminar Series, The University of Western Australia, Australia, June 18th 2013.

37. Computational Mechanics of Abdominal Aortic Aneurysm, 1st UK National Conference on Patient-Specific Modelling and Translational Research, Cardiff, Wales, UK, January 9-10, 2013.

38. Metabolic Imaging and AAA Biomechanics, Munich Vascular Conference 2012, Munich, Germany, December 1-2, 2012. ***Declined to move to UWA.***

39. Patient-Specific Modelling in Arteries, GEM 4 Summer School: Multi-scale modelling, Imperial College London, UK, September 10-14, 2012.

40. Aneurysms and Finite Element Analysis: Applications of Patient-Specific Modelling, 2nd Meeting of the EPSRC Patient-Specific Modelling Network, The University of Edinburgh, UK, September 27-28, 2011. p.12.

41. Image Guided Modelling for Estimation of Wall Stress in Arterial Disease, 1st Meeting of the EPSRC Patient-Specific Modelling Network, University of Swansea, UK, April 11-12 2011.

42. Rupture Behaviour of Abdominal Aortic Aneurysms: Engineering Insights with Clinical Gain, Institute for Materials and Processes Seminar, The University of Edinburgh, UK, January 27 2011.

43. Rupture Behaviour of Abdominal Aortic Aneurysms: A Computational and Experimental Investigation, Medical Physics Seminar, The University of Edinburgh, UK, October 7, 2010.

44. Towards an Improvement in Aneurysm Assessment: Coupling 3D Reconstruction Tools with Engineering Know-How. Proceedings of the Materialise World Conference 2010, Leuven, Belgium, April 21-23, 2010.

45. The Use of Asymmetry in Abdominal Aortic Aneurysm Rupture Risk Assessment: A Useful Diagnostic Tool?, Engineers Ireland Biomedical Research Medal, Royal College of Surgeons Ireland, Dublin, Ireland, May 19, 2008.

LEADERSHIP, EDITORIAL & PROFESSIONAL RESPONSIBILITIES

- **Founder and Lab Head** Vascular Engineering Laboratory (VascLab) at the Perkins (est 2014 and relocated to the Harry Perkins Institute in 2016).
- **Co-Founder and Leader** – Biomedical Engineering @ Perkins initiative. The first dedicated biomedical engineering research program within a medical research institute in Australia. Currently 3 research groups and >40 researchers.
- **Programme Chair of Biomedical Engineering**, UWA. Responsible for development, implementation and accreditation of the Master of Professional Engineering program (until Jan 2021).
- **Co-Founder and Leader** – UWA Biozone (www.biozone.uwa.edu.au). Includes the design and development of a new transdisciplinary PhD program at UWA.
- **UWA Innovation Fellow** (2019 onwards).
- **External PhD and Master Examiner**
    - Queensland University of Technology (2020) - PhD
    - Monash University (2020) – Master of Eng
    - University of Auckland (2019) - PhD
    - Macquarie University (2019) - PhD
- **NHMRC Grant Review Panel –** Assistant Chair, Project Grants (2016); Early Career Fellowships (2018); Investigator Grants (2019-present).
- **NZ HRC Programme Grant Review Panel** – Auckland (2017). Bioengineering expert member.
- **Editorial board member** –
    - Journal of Endovascular Therapy.
    - European Journal of Vascular and Endovascular Surgery (only engineer on the Board, until 2021).
    - Medical Engineering & Physics.
    - Bioprinting.
- **Editor** (Hoskins – Univ. Edinburgh; Lawford – Univ. Sheffield; Doyle - UWA) for new textbook on *'Cardiovascular Biomechanics'* (Springer). We wrote 14/17 chapters. This book aimed at postgraduate/undergraduate courses. Has been downloaded >2 million times since June 2017.
- **Editor** (Doyle, Miller, Wittek, Joldes – UWA; Nielson, Nash – Univ. Auckland) of *'Computational Biomechanics for Medicine'* annual book series published by Springer. This book is a snapshot of the current state of the art in the field. I was editor from 2013-18.
- **Scientific Faculty** of the International Meeting on Aortic Disease. Biannual conference held in Belgium. I am on the faculty since 2016.
- **Guest-editor** for a special journal issue in the Australasian Physical Sciences and Engineering in Medicine journal (2018).
- **Chair** (Swamanathan, Dilley, Doyle, Kennedy) of the 26th Annual ASBTE Meeting (2018).
- **Chair** (Doyle, Miller, Wittek, Joldes – UWA; Nielson – Univ. Auckland) of the annual *MICCAI Workshop on Computational Biomechanics for Medicine*.
- **Session Chair** – 4th International Conference on Computational and Mathematical Biomedical Engineering (CBME2015), Paris, France, 2015.
- **Guest-editor** (Doyle – UWA; Pankaj, Hoskins – Univ. Edinburgh; Nithiarasu – Swansea Univ.) for a special journal issue on *"Patient-Specific Modelling: Translation of Basic Research to Clinical Practice"* in the International Journal for Numerical Methods in Biomedical Engineering (vol. 2, 2013). Involved assigning reviewers, gathering reviews, approving manuscripts and overseeing publication.
- **Chair** (Doyle, Pankaj, Hoskins) of the 2nd Meeting of the EPSRC Patient-Specific Modelling Network. Held at The University of Edinburgh, UK.
- **Course co-director** (Doyle, McGloughlin) for Summer School in Medical Imaging (Univ. Limerick, Sept 3-7, 2012). Held in association with the World Molecular Imaging Congress 2012 and as part

of the Structured PhD Programme in Biomedical Engineering and Regenerative Medicine (BMERM).

- **Member** of the following bodies:
  - Australasian Society of Biomaterials and Tissue Engineering (ASBTE).
  - Medical Image Computing and Computer-Assisted Intervention (MICCAI) Society.
  - National Association of Research Fellows (NARF) of NHMRC.
  - Marie-Curie Fellow's Association.
- **Associate Member** of the Faculty Academy for the Scholarship of teaching (FASE) – UWA.
- **Active reviewer** for national and international funding agencies:
  - Australian Research Council (ARC).
  - National Health and Medical Research Council (NHMRC).
  - New Zealand Health Research Council.
  - Royal Society of New Zealand Te Aparangi.
  - National Institute of Health Research (NIHR).
  - Florida Department of Health Biomedical Research Programs.
  - Czech Science Foundation.
  - Austrian Science Fund.
  - Research Foundation - Flounders (FWO).
  - Velux-Stiftung (Switzerland).
  - Oak Ridge Associated Universities (USA).
- **Active reviewer** for 33 journals:
  - Aorta (IF=N/A).
  - Annals of Biomedical Engineering (IF=3.3).
  - Annals of Vascular Surgery (IF=1.4).
  - Arteriosclerosis, Thrombosis and Vascular Biology (IF=6.6).
  - ASME Journal of Biomechanical Engineering (IF=1.9).
  - Biomechanics and Modeling in Mechanobiology (IF=3.3).
  - Biomedical Engineering Online (IF=1.7).
  - Bioprinting (IF=N/A).
  - Cardiovascular Engineering and Technology (IF=N/A).
  - Cardiovascular and Interventional Radiology (IF=2.2).
  - Circulation: Arrhythmia & Electrophysiology (IF=4.7).
  - Circulation: Cardiovascular Imaging (IF=6.8).
  - Computer Methods in Biomechanics & Biomedical Engineering (IF=1.8).
  - Computers in Biology and Medicine (IF=1.8).
  - Computerized Medical Imaging and Graphics (IF=1.5).
  - European Journal of Vascular and Endovascular Surgery (IF=5.3).
  - Expert Review of Cardiovascular Therapy (IF=N/A).
  - IEEE Transactions on Biomedical Engineering (IF=2.5).
  - International Journal of Mechanical Sciences (IF=2.0).
  - International Journal for Numerical Methods in Biomedical Engineering (IF=2.3).
  - International Journal of Surgery (IF=1.7).
  - ISRN Anatomy (IF=N/A).
  - Journal of Biomechanics (IF=2.5).
  - Journal of Endovascular Therapy (IF=2.8).
  - Journal of the Mechanical Behaviour of Biomedical Materials (IF=3.3).
  - Journal of the Royal Society Interface (IF=4.9).
  - Materials (IF=2.7).

- Medical & Biological Engineering & Computing (IF=1.8).
- Medical Engineering & Physics (IF=1.9).
- Medical Hypotheses (IF=1.2).
- Scientific Reports (IF=4.5).
- Tissue Engineering (IF=4.3).
- Vascular Medicine (IF=1.7).

SUPERVISION & MENTORING - Supervision is/was at UWA unless noted.

Current Supervision:

Postdoctoral

1. Dr. Lachlan Kelsey (2020 – present)

Clinical Research Associate

2. Dr. Bijit Munshi (2020 – present)

PhD Candidates

3. James Mann (2020 – present)
4. Harrison Caddy (2020 – present)
5. Sam Boland (2020 – present)
6. Michael Vernon (2020 – present)
7. Ebrahim Vahabli (2019 – present)
8. Nikhilesh Bappoo (2018 – present)
9. Behzad Shiroud Heidari (2018 – present)

Honours Students

10. Georgia Khinsoe (2019 – present)
11. Emma Harrington (2021-present)
12. Matthew Hardie (2021-present)

Research Assistants

13. Arjun Balaji (2018 – present)
14. Jonathan Tapley (2019 – present)

Master of Professional Engineering

15. Nathan Letizia (2020 – present)
16. Marie-Jose Soto (2021-present)

Previous Supervision:

Postdoctoral

1. Dr. Louis Parker (2020 – 2021) – now at KTH, Sweden
2. Dr. Agus Aldana (2019) - Endeavour Research Fellow (now at Maastricht University)
3. Dr. Sumesh Sasidharan (2018) – Endeavour Research Fellow (now at Imperial College London)
4. Dr. Grand Joldes (2014 – 2016)
5. Dr. Noel Conlisk (2013 – 2016) – University of Edinburgh

PhD Completions

6. Albert Chong (2021) – Curtin University
7. Louis Parker (2020)
8. Ryley Macrae (2020)
9. Lachlan Kelsey (2019)
10. Siobhan O'Leary (2014) – University of Limerick

Master of Surgery Completions

8. Dr. Bijit Munshi (2020)

Master of Science Completions

11. Andreas Kristen (2015) – visited my group for 1y from TU Munich
12. John Killion (2010) – University of Limerick
13. Weiwei Xiang (2010) – University of Limerick

Master of Professional Engineering Completions

14. Dirk Blom (2020)
15. Cameron Wilson (2020)
16. Ana Fonseca (2020)
17. Daniel Fitzpatrick (2020)
18. Daniel Collopy (2019)
19. Eric Tran (2019)
20. Jon Kartawiharja (2019)
21. Lauren Malaxos (2018)
22. Usaid Rana (2018)
23. Shawn Xiong (2018)
24. Adit Martono (2018)
25. Harrison Caddy (2017)
26. Joe Rebhan (2017)
27. Brendon Lim (2017)
28. Ava Kazemi (2017)
29. Andrew Evans (2017)
30. Michael Selby (2017)
31. Nick Law (2017)
32. Braeden Webb (2017)
33. Russell Piper (2017)
34. Kirsty Chu (2017)
35. Luke Falconer (2017)
36. Simon Duong (2017)
37. Mark Zhang (2017)
38. Michael Millett (2017)
39. Thomas Edland (2017)
40. Tom Bosley (2017)
41. Lester Lee (2016)
42. Corey Drewe (2016)
43. Jordan D'Souza (2016)
44. Jia-Ying Choong (2016)
45. Brandon Doney (2016)
46. Duncan Lissiman (2016)
47. Bradley Byrne (2016)
48. Louis Parker (2016)
49. Emerson Brophy (2016)
50. Deepti Mangalam (2016)

Master of Engineering Completions

51. Koen Franse (2020) – TU Eindhoven (international internship)
52. Sarah Gaughan (2013) – University of Limerick

Honours Completions

53. Matt Moore (2018)
54. Ben Hislop (2018)
55. Tom Van der Veen (2018)
56. James Mallal (2017)
57. Nikhilesh Bappoo (2016)
58. Michael Di Giuseppe (2016)
59. Hayley Glover (2016)
60. Umberto Anderle (2016)
61. Heem Tao (2016)
62. Rob Cassir (2016)
63. Tim Crough (2016)
64. Sascha Lee (2015)
65. Brett Pitman (2015)
66. Joshua McLaughlan (2015)
67. William Mahede (2014)
68. Adam Byass (2014)
69. Jonathan Jacobs (2014)
70. Timothy Deacon (2014)
71. Lachlan Kelsey (2014)
72. Eileen Wiryadinata (2014)
73. Joel Stoianis (2013)
74. Henry Yang (2013)
75. Chon Ha (2013)

Research Assistants & Interns

76. Emma Harington (2019)
77. Samantha Richards (2018-2020)

MEDIA COVERAGE

TV

1. **Channel 7 News, Melbourne.** 31/07/2016. Audience = 289,000.
2. **Southern Cross Nightly News.** 31/07/2016. Audience = 57,000.
3. **Channel 7 News, Brisbane.** 30/07/2016. Audience = 271,000.
4. **Channel 7 News, Perth.** 4.30pm & 6pm. 28/07/2016. Audience = 27,000 & 171,000.
5. **TEN Eyewitness News, Channel 10, Perth.** 28/07/2016. Audience = 69,000.

Print/Online

6. ***Birth of a Breakthrough.*** The Post. 23 Feb 2019. Available at: https://t.co/0ICsb8OmBI
7. ***Bioprinting hope for heart disease.*** The Irish Times. 02 Feb 2017. Available at: http://www.irishtimes.com/news/science/bioprinting-hope-for-treating-heart-disease-1.2947724
8. Business News WA, Sept 2016, issue 29. Available at: https://www.businessnews.com.au/article/Engineering-a-healthy-future
9. Subiaco Post, 2016;33(41):p.7 & 77. Available at: http://postnewspapers.com.au/wp-content/uploads/2016/07/300716.pdf
10. ***Better heart research to combat Australia's no.1 killer.*** ScienceNetwork WA. Available at: http://www.sciencewa.net.au/topics/health-a-medicine/item/4195-better-heart-research-to-combat-australia-s-number-one-killer
    - Also appeared on medicalXpress
11. ***Biomedical Engineering @ Perkins.*** Perkins Magazine 2016, issue 1.
12. ***Cream of the 2014 Crop.*** *UWA Research Awards.* UWAnews 2014, vol 10, p. 19.
13. ***Key Opinion Leader – Barry Doyle:*** *Patient-specific modelling of aortic disease.* Materialise NV Newsletter. Circulated Dec 2013. Available at: http://myexperience2.getresponsepages.com/.
14. ***Researchers looking at new ways of improving [AAA] assessment.*** The Irish Times. 28/05/13.
15. ***Predicting rupture of AAAs*** (by Siobhan O'Leary). Engineers Ireland. 2/05/13. Available at: http://www.engineersjournal.ie/predicting-rupture-of-abdominal-aortic-aneurysms/
16. ***Barry Doyle awarded UWA Research Fellowship.*** *Graduate awards. Alumni.* UL Links Magazine 2012, vol. 5, issue 2, p. 99.
17. ***Researcher wins prize for imaging innovation*****.** Irish Medical Times. Friday, 27 Nov 2009, p. 8.
18. ***Barry Doyle awarded Mimics Innovation Award 2009*****.** UL Links Magazine 2009, vol. 3(1), p. 45.