CURRICULUM VITAE

Batmanathan Dayanand (Daya) Reddy

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Professor Emeritus, University of Cape Town

Department of Mathematics and Applied Mathematics

and

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Education

1970 – 1973	University of Cape Town: BSc(Eng) in Civil Engineering Degree awarded with first class honours
1974 – 1977	Cambridge University (Gonville and Caius College), United Kingdom: Doctoral studies in Mechanics; PhD degree awarded November 1977 Dissertation: *The Elastic and Plastic Buckling of Circular Cylinders in Bending*

Employment

1974	University of Cape Town: Junior Lecturer, Department of Civil Engineering
1978	University College London: Associate Research Assistant (Postdoctoral), Department of Civil and Municipal Engineering
1979 – 2020	University of Cape Town Departments of Applied Mathematics and Civil Engineering (joint appointment) Lecturer (1979 - 1981), Senior Lecturer (1982 - 1984), Associate Professor (1985 - 1987) Department of Applied Mathematics (since 1995, Mathematics and Applied Mathematics): Associate Professor (1988), Professor (1989 - 2020)
1984 – 2021	UCT Centre for Research in Computational and Applied Mechanics (CERECAM) Deputy Director (1984 - 1994); Co-Director (1996 - 1999); Director (1999 - 2021)
2002, 2008-9, 2017-18	Acting Deputy Vice-Chancellor (Feb - Jun 2002, Jul 2008 - Mar 2009, Jan 2017 - Jan 2018)
1999 – 2005	University of Cape Town: Dean, Faculty of Science
2007 – 2021	South African Research Chair in Computational Mechanics (Department of Science and Technology, and National Research Foundation), tenable at University of Cape Town

2021 – Professor Emeritus of Applied Mathematics, University of Cape Town

Visiting positions

1982	Brunel University, Department of Mathematics (January - June). Host: Professor RW Ogden
1987	Università di Pavia, Istituto di Analisi Numerica del CNR (January - June) Host: Professor F Brezzi
1989	University of Minnesota, Institute for Mathematics and its Applications (January - February)
1991	Stanford University, Division of Applied Mechanics (October - November) Host: Professor JC Simo
1993, 1997	Universität Karlsruhe, Institut für Technische Mechanik and Universität Stuttgart, Mathematisches Institut A (2 months each in 1993 and 1997) Hosts: Professors E Schnack and W Wendland
2003	Queen's University, Canada; Visiting Professor, Southern African Research Centre (January) Hosts: Professors J Crush and P Oosthuizen
2006	The University of Texas at Austin, Institute for Computational Sciences and Engineering: Visiting Faculty Fellowship (1 month in September – October) Host: Professor J T Oden
2007	Technische Universität Kaiserslautern, Institut für Mechanik Host: Professor P Steinmann (February)
2009	Timoshenko Visiting Scholar, Stanford University, Mechanics and Computation Group Host: Professor A Lew (January)
2013 - 2016	Visiting Professor, Leibniz Universität Hannover, Institut für Kontinuumsmechanik (1-2 months annually between May and July) Host: Professor P Wriggers

Elected fellowships and memberships, honours and awards

1974 – 1977	Smuts Trust Bursary for graduate research at Cambridge University
1992	Fellow of the Royal Society of South Africa
1992	Fellow of the University of Cape Town
1996	Member, Academy of Science of South Africa
2002	Fellow, South African Academy of Engineering
2004	Fellow, Academy of Sciences of the Developing World (TWAS)
2004	National Order of Mapungubwe (Bronze) bestowed by the President of the Republic of South Africa
2005	Member, Suid-Afrikaanse Akademie vir Wetenskap en Kuns
2006	Fellow, African Academy of Sciences
2008	Fellow, International Association for Computational Mechanics (IACM)

2009	South African Association for Computational and Applied Mechanics Award for Distinguished Service
2009	African Conference on Computational Mechanics Award for Outstanding Research
2012	Georg Forster Research Award of the Alexander von Humboldt Foundation, Germany
2016	South African Mathematical Society Award for Research Distinction
2016	Founding Fellow, Academy of Engineering and Technology of the Developing World (AETDEW)
2021	Degree of Doctor of Science, honoris causa, University of Stellenbosch, South Africa

Membership of professional societies

American Mathematical Society (AMS)
International Association for Computational Mechanics (IACM)
Society for Industrial and Applied Mathematics (SIAM) (USA)
South African Mathematical Society (SAMS)
South African Society for Numerical Mathematics (SANUM)
South African Association for Theoretical and Applied Mechanics (SAAM)

Service on professional committees and boards

University committees and positions (1995 to date)

1996 - 2005	General Purposes Committee of Senate, (subsequently Senate Executive Committee)
1995 - 2005	Doctoral Degrees Board (occasionally Deputy Chair and Acting Chair)
	Service on selection committees for posts at executive level:
1995	Post of Vice-Chancellor: elected to serve by Senate; Chairperson
1996	Posts of Deputy Vice-Chancellor: elected by Senate; Chairperson
1999 - 2000	Post of Vice-Chancellor: nominated by deans
2001 - 2004	Posts of Deputy Vice-Chancellor: nominated by deans
1996 - 99, 2002 - 2008	UCT Council, elected to serve by Senate
2015 - 2020	Advanced Computing Committee: Deputy chair

National committees and activities (1995 to date)

1997 - 2001	South African Mathematical Society: Member of Council
1996 - 2001	President, South African Association for Theoretical and Applied Mechanics
1997 - 2000	Chair, SA National Committee for the International Union of Mathematicians
1995 - 1997	Foundation for Research Development (FRD) Core Programme Evaluation Committee, Mathematical Sciences: Convenor
1995	FRD Committee for evaluating proposals in Mathematical Sciences, Open Programmes
1995 - 2000	Member, Rhodes Scholarships (South Africa-at-Large) Selection Committee
1996 - 2003	SA National Committee, International Union of Theoretical and Applied Mechanics: Chair

1996 - 2001	Academy of Science of South Africa: Council member
1998	General Assembly of the International Mathematical Union: South African delegate
1999 - 2008	Board of the National Research Foundation: Member, and Chair since July 2002
2005 - 2008	Meraka Institute (Advanced African Institute for Information and Communications Technology), South Africa: Member of the Research Advisory Panel
2011 - 2014	Education Council of the Western Cape: Vice-Chair
2012 - 2016	President, Academy of Science of South Africa
2013 - 2021	Stellenbosch Institute for Advanced Study (STIAS): Academic Advisory Board
2002 -	African Institute for Mathematical Sciences (AIMS), Cape Town: Trustee of the AIMS Trust, Member of the AIMS Council (Chair, 2017 – 2021)
2005 - 2010	Centre for High Performance Computing: Member of the Management Committee, and of the Scientific Advisory Committee (the latter since 2007)
2021 –	South African Journal of Science: Member of Editorial Advisory Board
2015 –	DSI-NRF Centre of Excellence in Mathematical and Statistical Sciences: Member of Steering Committee
2021 –	DSI-NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy: Member of Scientific Advisory Committee, and Chair of the Steering Committee (2022 -)

International committees and activities

2013 - 2019	InterAcademy Partnership (IAP) – Research: Co-chair and Executive Committee member
2015 - 2021	Centre International des Sciences Mécaniques (International Centre for Mechanical Sciences (CISM): Board of Directors
2014 - 2018	President-elect, ICSU (International Council for Science) (Sep. 2014); then (Nov. 2017 – Jul. 2018), Officer of the Executive Board
2018 - 2021	President, International Science Council (ISC)
2018 -	ISC Committee for Freedom and Responsibility in Science (chair, 2018 – 2021)
2020 -	Network of African Science Academies (NASAC): Advisory Group member
2018 -	Alexander von Humboldt Foundation (Germany): International Advisory Board member, and Chair (2022 -)
2022 -	Office for Astronomy Development (OAD), International Astronomical Union: Steering Committee member

Teaching experience and activities

I have taught the following courses in the Department of Applied Mathematics (from 1995, Mathematics & Applied Mathematics) at UCT: partial differential equations, classical mechanics, calculus of several variables (2nd year), complex variables, tensor analysis, applied functional analysis, methods of mathematical physics (3rd year), continuum Mechanics, numerical analysis and scientific computing, methods of mathematical physics, finite elements (3rd and 4th years), Honours projects on topics in continuum mechanics, variational methods, and finite element analysis

I have taught courses at Masters level, at CERECAM, on finite element analysis, continuum mechanics, and on nonlinear material behaviour.

Examining and reviewing activities

These include the following:

External examiner for courses in applied mathematics and engineering at a number of South African universities, and as examiner for masters and doctoral dissertations submitted to universities in South Africa, Germany and France.

External panel member on reviews of departments or schools of mathematical sciences at the Universities of the Free State, Pretoria, the Witwatersrand, and Zululand, and of the faculty of science, University of Johannesburg

Member of the review team for the statutory 2009 institutional review of the University of Johannesburg.

Panel member for review of project proposals, Deutsche Forschungsgemeinschaft (DFG) (Germany)

Research interests

My research interests lie at the intersection of continuum mechanics, applied functional analysis, and numerical analysis and computing. My research programmes address some or all of the following issues: the formulation in mathematical terms of problems in continuum mechanics; studies of the well-posedness of such problems; construction by computational means of approximate solutions; and studies of the quality of such approximations. I also have a serious involvement in finite element analysis *per se.* Recent major interests have been in the areas of plasticity, biomechanics, and mixed finite element methods.

Research appointees and postdoctoral researchers

Professor J M-S Lubuma, FRD Research Fellow, July 1993 - June 1994
Dr B-H Sun, Postdoctoral Researcher, July 1994 - June 1995
Dr M Küssner, Postdoctoral Researcher, January 1996 - December 1997
Ms D Kleine, Research Officer, July 1998 – February 2002
Dr JMW Munganga, Postdoctoral Researcher, January 1999 – June 2001
Dr F Ebobisse Bille, Postdoctoral Researcher, September 2002 – January 2004
Dr JK Djoko, Postdoctoral Researcher, October 2004 – December 2005
Dr NS Weerasekara, Postdoctoral Researcher, November 2006 - April 2008
Dr AT McBride, Research Officer, July 2007 – February 2010
Dr V Udoewa, Postdoctoral Researcher, September 2007 – August 2009
Dr S Jasinoski, Postdoctoral Researcher, January 2009 – December 2011
Dr O P Layeni, Postdoctoral Researcher, June 2010 – June 2012
Dr A Appadu Rao, Postdoctoral Researcher, July 2010 – June 2011
Dr M Kona, Postdoctoral Researcher, October 2011 – July 2012
Dr P Singh, Postdoctoral Researcher, August 2012 – July 2013

Dr M MacDevette, Postdoctoral Researcher, April 2014 – July 2016
Dr M Malahe, Postdoctoral Researcher, June 2016 – May 2018
Dr MF Wakeni, Postdoctoral Researcher, Nov 2016 – Dec 2018
Dr HH Gidey, Postdoctoral Researcher, May 2017 – Dec 2019
Dr BJ Grieshaber, Postdoctoral Researcher, July 2017 – Dec 2019
Dr S Stark, Postdoctoral Researcher, Oct 2018 – Mar 2020
Dr O Kayode, Postdoctoral Research, Jan 2021 –

Postgraduate students

Students have been registered in the Faculty of Science except for those whose names are marked with an asterisk, and who were registered in the Faculty of Engineering and the Built Environment

Masters students

*G A Duffett	1981	*Plastic buckling of initially imperfect cylinders in axial compression*
*G P Mitchell	1982	*A programming approach to the solution of problems involving elastic-plastic plates*
*A C Bolt	1983	*The use of a non-classical friction law in finite element analysis of contact problems*
*L R Watkins	1986	*Electromagnetic field solutions via the finite element method*
*R A Eve	1986	*Conforming finite element methods for static and eigenvalue problems of thin elastic shells*
H F du Toit	1986	*Finite element analysis of eigenvalue problems in the stability of fluid motions* Degree awarded with distinction
*M B Nates	1989	*Parameters affecting the performance of tube mills* (co-supervisor: Professor GN Nurick)
*K von Bentheim	1991	*Dynamics of balls in tube mills* (co-supervisor: Professor GN Nurick)
M B Volpi	1991	*Mixed finite element approximations for circular arches* Degree awarded with distinction
C le Roux	1991	*Mixed variational problems associated with viscous incompressible free surface flows* Degree awarded with distinction
K Arunakirinathar	1991	*Mixed finite element approximations for curved rods* Degree awarded with distinction
L H G Chandrasiri	1992	*The solution of steady-state free surface problems by the finite element method*

G C Schroeder	1993	*Estimates for the rate of convergence of finite element approximations of the solution of a time-dependent variational inequality* Degree awarded with distinction
*M A Stülpner	1995	*Various continuum bone remodelling algorithms applied to the proximal femur in two and three dimensions* (co-supervisor: A Spirakis)
*I MacKellar	1998	*The mechanical design aspects of a small diameter vascular prosthesis* (co-supervisor: G R Starke)
J K Diatezua	1999	*Some theoretical aspects of fibre suspension flows*
T Koch	2005	*Non-linear finite element analyses of the aortic heart valve*
H van der Merwe	2007	*Development of a numerical tool for the design optimization of vascular prostheses towards physiological compliance* MSc (Med) degree awarded with distinction (co-supervisor: Dr T Franz)
*S Bartle	2009	*Shell finite elements, with applications in biomechanics*
*KEW Penzhorn	2009	*Consistency and convergence of SPH approximations*
*EB Ismail	2009	*Smoothed particle hydrodynamics for nonlinear solid mechanics* (co-supervisor: Prof GN Nurick)
*Y Kajee	2010	*The biomechanics of the human tongue*
*HL Morrissey	2011	*The modelling of natural fibre-reinforced composites using a multi-scale methodology*
* L Adams	2011	*Finite element method using vector finite elements applied to eddy current problems* (co-supervisor: Prof A Wilkinson)
* NJN Richardson	2012	*An investigation into aspects of rate-independent single crystal plasticity*
J MBewu	2012	*Modelling of biomaterial therapies for infarcted hearts* (co-supervisor: Dr S Skatulla)
I Donev	2013	*Time-dependent finite element simulations of a generalized Oldroyd-B fluid* Degree awarded with distinction
T Povall	2013	*Single-crystal plasticity at finite strains: an investigation of hardening relations* (co-supervisor: Dr AT McBride) Degree awarded with distinction
*R Pauck	2014	*Computational analysis towards the design of biodegradable polymeric coronary artery stents* Degree awarded with distinction

*E Ssozi	2014	*The effect of viscoelastic deformation in pipe cracks on leakage response to variations in pressure* (Primary supervisor: Prof J van Zyl) Degree awarded with distinction
*G Gakingo	2016	*The impact of thermophysical properties on nanofluid-based solar collector performance* (co-supervisor: Dr M MacDevette) Degree awarded with distinction
NM Musehane	2016	*Direct numerical simulation of bubble-bubble and droplet-droplet interactions using a surface thin film model* (co-supervisor Dr O Oxtoby)
*W Guess	2016	*Fluid structure interaction modelling of a patient-specific arteriovenous access fistula* (co-supervisor Dr AT McBride) Degree awarded with distinction
*MM Shirzadi	2016	*Development of a patient-specific finite element model of the transcatheter aortic valve implantation (TAVI) procedure* (co-supervisor Dr H Appa)
K Etekpo	2017	*Numerical solution for subsurface reservoir simulation* (co-supervisor Dr A Tambue)
NP Mhlongo	2019	*Computational investigations of strain-gradient plasticity*
D van Huyssteen	2019	*The Virtual Element Method applied to problems of transversely isotropic elasticity*
N Vundla	2019	*Numerical modelling of the Oldroyd-B fluid*

Doctoral students

*G A Duffett	1985	*Some aspects of the numerical solution of equilibrium problems in finite elasticity*
*T B Griffin	1986	*Variational and numerical aspects of problems in classical plasticity*
G P Bleach	1989	*Acceleration waves in constrained thermoelastic media*
T Gültop	1992	*A finite strain theory of elastoplasticity and its application to wave propagation*
R A Eve	1992	*Theoretical and numerical aspects of problems in finite strain plasticity*
*A Ozinsky	1993	*Mathematical simulation of dynamic behaviour of secondary settling tanks* (Primary supervisor: Prof GA Ekama)

H de G Laurie	1994	*Nonlinear age-dependent population dynamics* (co-supervisor: Prof R Cowling)
*W J de Kock	1994	*Numerical simulation of the plastics injection molding process* (co-supervisor: Professor JB Martin)
K Arunakirinathar	1995	*Mathematical and numerical aspects of the enhanced strain finite element method*
J M W Munganga	2000	*Existence and stability of solutions to the equations for fibre suspension flows*
B J L Brown	2001	*A variational approach to local optimality in control theory*
S K F Hattingh	2002	*Finite element analysis of flows in fractured hydrocarbon reservoirs*
*D Kleine	2003	*Finite element analysis of flows in secondary settling tanks*
*M S Yeoman	2004	*The design and optimisation of fabric reinforced grafts using finite element methods and genetic algorithms*
M S Tladi	2004	*Well-posedness and long-time dynamics of β-plane ageostrophic flows*
J K Djoko	2004	*Convergence in the incompressible limit of finite element approximations based on the Hu-Washizu formulation in elasticity*
*A T McBride	2008	*Formulation, analysis and solution algorithms for a model of gradient plasticity within a discontinuous Galerkin framework*
Q Reynolds	2009	*Mathematical and computational modeling of the behaviour of direct current plasma arcs*
RL Benjamin	2010	*Non-maximum entropy polymer elasticity theory, viscoelasticity, and the lattice Boltzmann method*
HBH Mohamed	2012	*Properties of solutions of the equations for generalized Oldroyd-B fluids*
BJ Grieshaber	2013	*Locking-free discontinuous Galerkin methods for problems in elasticity, using linear and multilinear approximations*
A Chama	2014	*Three-field mixed finite element approximations for problems in elasticity*
*J-P Pelteret	2014	*A computational neuro-muscular model of the human upper airway with application to the study of obstructive sleep apnoea*
*AEJ Bogaers	2015	*Efficient and robust partitioned solution schemes for fluid-structure interactions* (co-supervisors: Profs S Kok and T Franz)
MF Wakeni	2016	*Stable algorithms for generalized thermoelasticity based on operator-splitting and time-discontinuous Galerkin finite element methods* (co-supervisor: Dr AT McBride)

*AM de Villiers	2017	*A patient–specific FSI model for vascular access in haemodialysis* (co-supervisor: Dr AT McBride)
F Rasolofoson	2019	*Convergent finite element approximations for problems of near-incompressible and near-inextensible transversely isotropic linear elasticity*
*T Povall	2019	*Dense granular flow in rotating drums: a computational investigation of constitutive equations* (co-supervisors: Prof. I Govender, Dr. S Wheaton, Dr. AT McBride)
*JO Bergh	2019	*On the evaluation of common design metrics for the optimization of non-axisymmetric endwall contours for a 1-stage turbine rotor* (co-supervisor: Dr. G Snedden)
*EM Griffiths	2020	*Micromechanical modelling of advanced hierarchical composites* (co-supervisor: Prof. S Bargmann)
*D van Huyssteen	2021	A virtual element method for hyperelasticity
*BH Alheit	2022	Multiscale modelling of sutures in a high-performing biological protective structure: The turtle shell (co-supervisor: Prof. S Bargmann)
*MMO Hamed	2022	Numerical simulation of friction welding processes (co-supervisor: Dr AT McBride) Award of degree subject to minor corrections

Current postgraduate student

*EB Ismail	PhD	*Numerical models for strain-induced crystallization*

Research colloquia

I have presented colloquia on my research at the following institutions:

Canada Queen's University, Kingston, Ontario

China Peking University

Czech Republic Charles University, Prague

Germany: Technische Hochschule Darmstadt, Universität Karlsruhe, Leibniz Universität Hannover,

Universität Stuttgart, Technische Universität Kaiserslautern, Humboldt Universität Berlin, Universität Duisburg-Essen, Technische Universität Braunschweig

India: Tata Institute for Fundamental Research (Bangalore, India), Indian Institute of Technology (Madras)

Italy: Università di Pavia, Politecnico di Milano

South Africa: University of Cape Town (Departments of Applied Mathematics, Civil Engineering, Chemical Engineering, Mathematics, Physics), University of the Western Cape, University of Durban-Westville, University of Pretoria, University of Transkei, University of Kwazulu-Natal, National Research Institute for Mathematical Sciences (CSIR, Pretoria), University of South Africa

Switzerland: Eidgenössische Technische Hochschule (ETH) (Zürich)

United Kingdom: Brunel University, University of Bath, University of East Anglia, University of Nottingham, University of Glasgow

USA: Brown University, Carnegie-Mellon University, The University of Texas at Austin, Massachusetts Institute of Technology, Oregon State University, Stanford University, Texas A&M University, University of California at Berkeley, University of Houston

Presentations at conferences

Invited and keynote presentations (2016 to date)

1st International Conference on Emerging Trends in Applied Mathematics and Mechanics, Perpignan, France, 30 May – 3 June 2016: `*Strain-gradient plasticity under conditions of non-proportional loading*'

6th IASTED African Conference: Modelling and Simulation, Gaborone, Botswana, 5 – 7 September 2016: *`Modelling, computational simulation, and biomechanics'*

1st BRICS Mathematics Conference, Beijing, China, 21 – 25 August 2017: *'Modelling, analysis and computation in plasticity'*

2nd International Conference on Emerging Trends in Applied Mathematics and Mechanics, Krakow, Poland, 18 – 21 June 2018: *'Analytical and numerical investigations of locking in transversely isotropic elasticity'*

7th International Conference on Mathematical Modelling and Computational Methods in Applied Sciences and Engineering, Olomouc, Czech Republic, 16 – 20 September 2019: *`Analytical and numerical investigations of locking in transversely isotropic elasticity'*

62nd Annual Congress of the South African Mathematical Society, Cape Town on 2 - 4 December 2019': *`Analysis and Computation in Solid Mechanics'*

Keynote and plenary lectures in the areas of science policy and public engagement (2016 to date)

International Conference on Evaluating and Assessing the Societal Impact of Science, Stockholm, 12-13 June 2017: `*The ingredients of effective engaged scholarship*'

3rd International Conference on Science Advice to Government, organized by INGSA, Tokyo, 6-7 November 2018: `*The Sustainable Development Goals and the science policy interface*'

International Conference on the Role of Science in Contributing to the Reduction of Poverty and Inequality, Rio de Janeiro, 27-29 March 2019: '*Building better science-policy interfaces for poverty eradication and inequality reduction'*

World Conference on Science Literacy ,Beijing, 16 October 2019: plenary lecture "*Science literacy for sustainable development, for a shared and better future'*

4th SDG Conference, Bergen, Norway, 10-12 February 2021: keynote lecture "*Public engagement, scientific literacy and the science-society nexus"*

Presentations at specialist workshops (2016 to date, selected)

Symposium on 'Dislocation based Plasticity', Schloss Schöntal , Germany, 26 February – 1 March 2018: '*Some investigations of energetic and dissipative theories of strain-gradient plasticity'*

Euromech Colloquium 600, 'New Challenges in Finite Element Technology: from the Perspectives of Mechanics and Mathematics', Aachen, Germany , 12 – 14 March 2019: *Convergent approximations for near-incompressible and near-inextensible transversely isotropic elasticity*

Local conferences

I am a regular contributor to the following local conferences: Annual Congresses of the SA Mathematical Society, Annual Symposia of the SA Society for Numerical Mathematics, and SACAM (SA Conferences on Applied Mechanics)

Membership of conference committees (2009 to date)

ECCM2010, Fourth European Conference on Computational Mechanics, Paris, 16 – 21 May 2010: International Advisory Board member

Second International Conference on Computational and Mathematical Biomedical Engineering, George Mason University, USA, 30 March - 1 April 2011: International Advisory Board member

11th International Conference on Computational Plasticity, Barcelona, 7 – 9 September 2011: Advisory Scientific Committee member

European Congress on Computational Methods in Applied Sciences and Engineering, Vienna, Austria, 10 – 14 September 2012: Scientific Committee member

12th International Conference on Computational Plasticity, Barcelona, 7 – 9 September 2013: Advisory Scientific Committee member

African Conferences on Computational Mechanics (2009, 2011, 2013): At various times conference chair and organizing committee member

The 8th International Conference on Computational Methods (ICCM2017), Guilin, China, 25 – 29 July 2017: International Scientific Advisory Committee member

International Conference on Industrial and Applied Mathematics (ICIAM) 2019: Scientific Program Committee member

Editorial and review activities

Reviewing activities:

Evaluations for the National Research Foundation and the National Science Foundation (USA)
Springer-Verlag (New York and Berlin): book manuscripts
Research articles submitted to the journals
Applied and Numerical Mathematics
Archive for Rational Mechanics and Analysis
Communications in Numerical Methods in Engineering
Computational Mechanics
Computer Methods in Applied Mechanics and Engineering
Computers and Structures
European Journal of Mechanics: A/Solids
Journal of the Mechanics and Physics of Solids
Indian Journal of Pure and Applied Mathematics
International Journal for Engineering Analysis and Design
International Journal of Engineering Science
International Journal for Numerical Methods in Engineering
International Journal of Plasticity
International Journal of Solids and Structures
Mathematical Models and Methods in Applied Sciences
Numerische Mathematik
Numerical Methods for Partial Differential Equations
Quarterly of Applied Mathematics
The Royal Society of Edinburgh Proceedings A (Mathematics)
SIAM Journal on Applied Mathematics
SIAM Journal on Numerical Analysis
Water SA
Zentralblatt für Mathematik

Membership of Editorial Boards or Advisory Boards:

Acta Academica Solida Sinica
Engineering Analysis and Design
Computational Mechanics
Computer Methods in Applied Mechanics and Engineering
Computers and Structures
International Journal for Computational Civil and Structural Engineering (Russia)
Journal of Applied Mathematics and Statistics

International Journal of Computational Methods in Engineering Science and Mechanics
Journal of the Mechanical Behavior of Solids

Publications

Over 200 publications including 4 monographs and 3 edited volumes of invited papers: see http://www.cerecam.uct.ac.za/people/bdr/publist