

Centre for Exercise and Sports Science Research (CESSR)



Annual Report 2008



Faculty of Computing, Health and Science
School of Exercise, Biomedical and Health
Sciences

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INTRODUCTION

The Centre for Exercise and Sports Science Research (CESSR) was established in 2007 upgraded from the Exercise and Sports Science Research Group (ESSRG) formed in 2000. CESSR focuses on various aspects of exercise and sport for both athlete performance and health in the general population. Our aims are 1) to foster high quality research in exercise and sports science at ECU; 2) to promote and enhance the teaching of exercise and sports science at ECU; 3) to attract and support honours and postgraduate students; 4) to establish collaborative links with other research groups and institutes; 5) to attract research funding from competitive grant agencies and industry; and 6) to contribute to exercise and sports science needs at local, national and international levels. Major areas of specialisation have included: biomechanics; physiology of exercise; psycho-social aspects of sport and leadership; multi-dimensional studies into ageing; motor control and learning; exercise rehabilitation; strength and conditioning science and chronic disease management.

This was our second year at Level 2 status, and we have exceeded the outcomes from the previous year for all aspects such as publications, research student completions, and grants. All of the aims shown above have been achieved in 2008 as shown in the sections below. Research conducted by staff at CESSR has continued to build during 2008 due to the continuing high research activity of the staff and students. CESSR is striving to improve the outcomes and achieve the aims at higher levels in 2009.

This report covers the membership and research activities in 2008 consisting of grants, publications, conference presentations, research student completions, awards, expert evaluations of academic thesis, strategic research alliance, visiting research fellow, media coverage, and patent. Other items such as appointment to boards or external committee are not included in this report; however, the information is available upon request.

MEMBERSHIP

The CESSR was lead by the Foundation Professor in Exercise and Sports Science Robert Newton in the last two years. Professor Ken Nosaka was appointed to the coordinator position in February 2009, and currently coordinates the team of academic and technical staff, strategic adjunct appointments, honours and postgraduate students. The members of the CESSR are consisted of all full time academic staff and research students of Exercise and Sports Science discipline of the School of Exercise, Biomedical and Health Sciences, and adjunct members as shown below. It should be noted that current members (in 2009) are not the same as those in 2008, because of some new appointments. Since this report is for 2008, the staff members who have joined us from 2009 are not included in this report.

ACADEMIC STAFF MEMBERS

Professor Ken Nosaka
CESSR coordinator
Postgraduate course coordinator
Expert in

- Exercise-induced muscle damage and adaptation
- Muscle soreness and pain
- Eccentric training
- Neuromuscular fatigue
- Recovery strategies
- Ergogenic aids and nutritional supplements

Professor Robert Newton
Foundation Professor of Exercise and Sports Science
Director of Vario Health Institute
Expert in

- Strength and conditioning
- Exercise and chronic disease prevention and management
- Assessment and development of neuromuscular power
- Resistance training for the elderly

Associate Professor Barry Gibson
Head of School of Exercise, Biomedical and Health Sciences
Expert in

- Leadership in sport
- Sport psychology

Associate Professor Angus Burnett

Expert in

- Sports biomechanics (cricket, golf, weightlifting, rowing)
- Low back pain in sports and exercise
- Spinal biomechanics
- Former elite junior track and field coach (triple jump and Javelin throw)

Associate Professor Anthony Blazeovich

Expert in

- Neuromuscular adaptations to physical training and detraining
- Training and genetic bases of strength, speed and endurance performance
- Optimisation of training plans for athletic and patient populations

Associate Professor Paul Laursen

Expert in

- Thermoregulation, precooling, and hydration
- Pacing, fatigue and recovery from exercise
- Training program optimization for endurance athletes
- Cycling, running, and triathlon performance

Dr Mike McGuigan

Senior Lecturer

Expert in

- Resistance Training
- Monitoring Training

Dr Mike Newton

Lecturer

Expert in

- Strength and power assessment
- Field based endurance and sprint testing
- Exercise-induced muscle damage and soreness

Dr Greig Watson

Lecturer

Expert in

- Regulation of body water and body temperature
- The effects of manipulating body water and body temperature on body systems and performance
- Heat acclimation adaptations
- Effects of nutrition and nutritional supplements on body systems and performance
- Optimizing cycling performance

Dr Nikola Medic

Lecturer

Expert in

- Sport Psychology
- Human Motivation

- Aging and Performance
- Quantitative Statistics
- Mental Skills Training

Dr Daniel A. Galvão
Postdoctoral research fellow
Expert in

- Exercise in prevention and management of cancer.
- Androgen deprivation therapy for prostate cancer
- Ageing, exercise and the musculoskeletal system

Dr Jeremiah Peiffer
Postdoctoral research fellow
Centre of Excellence for Alzheimer's Disease Research and Care Vario Health
Institute
Expert in

- Thermoregulation
- Recovery
- Exercise and Alzheimer's Disease
- Ageing

Dr Chris Abbiss
Postdoctoral research fellow
Expert in

- Thermoregulation
- Cycling
- Fatigue
- Pacing strategies

Kylie Cormack
Undergraduate Course Coordinator, Practicum Coordinator
Expert in

- Tertiary and educational administration and curriculum development
- Career counselling and guidance, Exercise and Sport Science students
- Development and delivery of performance units at tertiary level (netball and dance)
- Effects of supplementary training on full-time dance students
- Injuries attained through landing in netball
- Development of fundamental movement skills and fitness in children

Jane Dundas
Lecturer
Expert in

- Transcranial brain stimulation
- Neurophysiological assessment of motor control
- Neuroscience
- Neurological clinical exercise physiology
- Motor control

Fiona Iredale

Lecturer

Expert in

- Sports Injuries
- Exercise Rehabilitation

Barbara Howard

Lecturer

Expert in

- Social psychology of sport
- Human movement and disabilities

ADJUNCTS

Professor William Kraemer (University of Connecticut)

Professor Michael Stone (USOTC)

Dr. Paul Sacco (University of East London)

Professor Bonnie Berger (Bowling Green State University)

Associate Professor Kay Cox (Medical Research Foundation, Royal Perth Hospital)

Professor John Cronin (Auckland University of Technology)

Dr. Elizabeth Rose (Honorary Senior Lecturer, Edith Cowan University))

TECHNICAL STAFF

Jack Burns

Nadija Vrdoljak

PhD Students and their Research Projects (Supervisors)

- Abdulaziz Al Dayel: Comparison between pulsed current and alternating current in electrical muscle stimulation for muscle function, damage and hormonal responses (Mike McGuigan, Ken Nosaka)
- Warren Andrews: Injury risk and functional status of the hamstring muscles: Effects of fatigue under game conditions and evaluation of prophylactic conditioning programmes (Rob Newton)
- Matt Brughelli: Risk factors, assessment and prevention of muscle strain injuries (John Cronin, Ken Nosaka)
- Prue Cormie: The influence of strength level on the force-velocity relationship and the ability to adapt to power training (Rob Newton, Mike McGuigan)

- Stuart Cormack: Neuromuscular fatigue, hormonal profile, immune response and markers of muscle damage in elite Australian footballers (Robert Newton, Mike McGuigan)
- Keir Hansen: Maximising explosive force-time and power-time loading parameters (John Cronin, Mike Newton)
- Wing Yin Lau: Muscle pain and exercise (Ken Nosaka, Anthony Blazevich, Mike Newton)
- Kristie Lee-Taylor: Using critical flicker fusion and kinetic data to predict readiness for training (John Cronin, Michael Newton)
- Nur Ikhwan Mohammad: Kinematics and kinetics associated with hypertrophy training (John Cronin, Ken Nosaka)
- Joseph Mate: Heat stress in mining industry: A practical approach to reducing heat strain in miners (Paul Laursen, Greig Watson, Jacques Oosthuizen)
- Lynda Murray: Effects of peripheral sensory inputs on cortical responses to spike timing dependent plasticity (Ken Nosaka, Gary Thickbroom)
- Makii Muthalib: Effects of exercise-induced muscle damage on muscle microcirculation investigated by near infrared spectroscopy (NIRS) (Ken Nosaka, Guillaume Millet)
- Marika Noorkoiv: Factors affecting isometric force-length relationship (Anthony Blazevich, Ken Nosaka)
- Debra Perich: Low back pain in schoolgirl rowers: Prevalence, bio-psycho-social factors and intervention (Angus Burnett)
- Steve Pratt: Nutrition and physical activity programs for cancer patients (Rob Newton)
- Marc Quod: Mathematically modelling the training and performance power outputs of elite cyclists (Paul Laursen)
- Jeremy Sheppard: The competitive, physiological and trainable aspects of vertical jump performance: A focus on volleyball athletes (Rob Newton, Mike McGuigan)
- Rodney Siegel: The role of exercise in reversing treatment toxicities in prostate cancer patients (Paul Laursen, Ken Nosaka, Greig Watson)
- Alastair Stewart: Self-perceptions and motivation changes with a behavioural intervention versus a self-managed program in older adults: The PATH Study (Elizabeth Rose)

- Bradley Wall: The role of exercise in reversing treatment toxicities in prostate cancer patients (Rob Newton, Daniel Galvao)

Masters by Research Students and their Research Projects (Supervisors)

- Melissa deKlerk: The influence of hip abductor fatigue on the level of non-contact ACL injury risk in sub-elite and recreational Australian netball players (Ken Nosaka)
- Richard Garrad: Systemic and muscle oxygen consumption in maximal and submaximal concentric and eccentric contractions of the elbow flexors (Ken Nosaka)
- Sandra Hill-Williamson: Are performance tests able to effectively discriminate between elite, sub-elite and recreational level youth soccer players? (Mike Newton, Ken Nosaka)
- Ben Hinton: Does whole-body vibration elicit the same potentiation response as a heavy strength set? (Mike Newton, Mike McGuigan)
- Kenny Hong: Correlation between performance tests and time motion analysis of youth soccer (Mike Newton, Mike McGuigan)
- Chris Joyce: Examination of trunk kinematics and their relationship to ball velocity in low handicap male and female golfers using a Modern swing (Angus Burnett)
- David Kinsella: Acute physiological and performance effects of a high intensity in-season resistance training program on Australian rules footballers (Mike Newton, Mike McGuigan)
- Wing Yin Lau: Effect of vibration on eccentric exercise- induced muscle damage (Ken Nosaka)
- Karel Madou: Effect of whole body vibration training on functional performance of multiple sclerosis sufferers (John Cronin)
- Travis McMaster: The effect of resistance mode on squat and jump kinematics and kinetics (John Cronin, Mike McGuigan)
- Cesar Meylan: Kinematic and kinetic characteristics of unilateral jump assessments: reliability, asymmetry, and relationship to jump performance (John Cronin, Ken Nosaka)

- Dom Passalacqua: Trunk kinematics in static and dynamic balance control: An examination of proximal to distal sequencing and centre of pressure (Angus Burnett)
- Roger Pegoraro: The validity and reliability of a fatiguing protocol to induce exercise-associated muscle cramp (Paul Laursen, Ken Nosaka, Greig Watson)
- Ben Piggott: The relationship between training load and the incidence of injury and illness over a pre-season at an Australian Football League Club (Mike McGuigan, Mike Newton)
- Sam Goh Shi Shien: Effects of lower body compression garments (Skins™) on submaximal and maximal running performance in hot and cold conditions in male recreational runners (Paul Laursen, Ken Nosaka)
- Kyle Smith: Keeping the aged Healthy, happy and independent through physical and cognitive exercise (Darryl Turner, Rob Newton)
- Ben Thomasian: The effect of vertical or horizontal plyometric exercise on sprint performance, and muscle architecture and function (Anthony Blazeovich, Dale Chapman)
- Wei Peng Teo: The effects of circadian rhythmicity on force production, power output and salivary cortisol response (Mike McGuigan, Mike Newton)

Honours students and their Research Projects (Supervisors)

- Mirza Abdul Latif: The relationship between session rate of perceived exertion measures and the volume load of resistance training (Mike McGuigan, Mike Newton)
- Lilian Min Yen Chye: Modulation of corticomotor excitability during passive and active wrist flexion and extension (Ken Nosaka, Gary Thickbroom)

SUMMARY OF RESEARCH ACTIVITY

Key performance indicators in terms of research productivity increased markedly from last year (2007) for all aspects. Grants awarded increased from \$499,480 to \$1,562,923 (313%), the number of refereed journal publications increased from 46 to 74 (161%), the number of conference presentations increased from 39 to 62 (159%),

and the number of research student (PhD, Masters by Research, Honours) completions increased from 11 to 15 (136%). These were due to the effort of all members of the CESSR. It should be noted that many of the refereed journal publications were in “high-impact” journals and first-authored by the research students. The Centre extended collaborations with institutions and researchers all over the world. It is concluded that the Centre performed very well in 2008, and is striving to perform better for the coming years.

GRANTS AWARDED

8 grants and \$ 1,562,923 in total

Internal (\$247,228)

- Al-Abdeli, Y., Laursen, P.B., Kothapalli, G., Watson, G., Nosaka, K. (2008). Thermofluids research equipment. ECU Research Infrastructure Block Grant. \$151,132
- Newton R.U., McGuigan M., Galvao D., Peiffer J.J. (2008). Cardiovascular and respiratory stress testing system. ECU Research Infrastructure Block Grant. \$82,316
- Peiffer J.J., Watson G., Millet G., Chapman D. (2008). Attenuating fatigue during team sports using a short duration cold water immersion intervention. Early Career Grant Scheme. \$13,780

External (\$1,315,695)

- Galvão, D.A., Newton, R.U., Spry, N., Taaffe, D.R., Denham, J., Lamb, D., Duchesne, G., Joseph, D. (2008). Population-based exercise intervention for prostate cancer patients – RADAR. Prostate Cancer Foundation of Australia Grant YIG07. \$476,024
- McGuigan, M., Gunton, R. (2008-2009). YMCA Strong Kids. Healthy Active Australia. \$199,958
- McGuigan, M. (2008). Hormonal monitoring of training in elite Australian Rules Football players. West Coast Eagles Football Club. \$12,801
- Newton, R.U., Taaffe, D.R., Spry, N., Galvão, D.A. (2008). A Phase III clinical trial of exercise modalities on treatment side-effects in men receiving therapy for

prostate cancer. National Health and Medical Research Council. Project Grant 534409. \$500,000

- Newton, R.U, Galvão, D.A. (2008). The Back Shed – A virtual community for men’s health and wellness. Prostate Cancer Foundation of Australia. \$71,500
- Nosaka, K., Laursen, P.B., Watson, G. (2008). Assessment of standing fatigue. Taisho Pharmaceutical Co., Ltd. \$55,412

PUBLICATIONS

82 publications in total

Referred Journals (74 publications)

1. Abbiss C.R., Laursen P.B. (2008). Describing and understanding pacing strategies during athletic competition. *Sports Medicine*. 38(3): 239-252. [impact factor 3.504]
2. Abbiss C.R., Levin G., McGuigan W.R., Laursen P.B. (2008). Reliability of power output during dynamic cycling. *International Journal of Sports Medicine*. 29(7): 574-578. [impact factor 1.240]
3. Abbiss C.R., Peiffer J.J., Peake, J., Nosaka K., Suzuki K., Martin D.T., Laursen P.B. (2008). Effect of carbohydrate ingestion and ambient temperature on muscle fatigue development in endurance-trained male cyclists. *Journal of Applied Physiology*. 104(4): 1021-1028. [impact factor 3.178]
4. Abbiss C.R., Peiffer J.J., Wall B.A., Martin D.T., Laursen P.B. (2009). Influence of starting strategy on time trial performance in the heat. *International Journal of Sports Medicine*. 30(3): 188-193. [impact factor 1.240]
5. Abbiss C.R., Straker L., Quod M.J., Martin D.T., Laursen P.B. (2008). Examining pacing profiles in elite female road cyclists using exposure variation analysis. *British Journal of Sports Medicine*. May. Epub ahead of print. [impact factor 2.233]
6. Alcaraz, P.E., Sánchez-Lorente, J. & Blazeovich, A.J. (2008). Physical performance and cardiovascular responses to an acute bout of heavy resistance

- circuit training vs. traditional strength training. *Journal of Strength and Conditioning Research*. 22(3): 667-671. [impact factor 1.336]
7. Baker, D., Newton, R.U. (2008). Comparison of lower body strength, power, acceleration, speed, agility, and sprint momentum to describe and compare playing rank among professional rugby league players. *Journal of Strength and Conditioning Research*. 22(1):153-158. [impact factor 1.336]
 8. Blazeovich, A.J., Horne, S., Cannavan, D., Coleman, D.R. & Aagaard, P. (2008). Effect of contraction mode of slow-speed resistance training on the maximum rate of force development in the human quadriceps. *Muscle & Nerve*. 38: 1133-1146. [impact factor 2.424]
 9. Bryant, A., Creaby, M., Newton, R.U., Steele, J. (2008). Dynamic restraint capacity of the hamstring muscles has important functional implications following ACL injury and ACL reconstruction. *Archives of Physical Medicine and Rehabilitation*, 89:2324-31. [impact factor 2.391]
 10. Buchheit, M., Peiffer, J.J., Abbiss, C.R., Laursen, P.B. Effect of cold water immersion on post-exercise parasympathetic reactivation. *American Journal of Physiology Heart and Circulation Physiology*. Dec 12. Epub ahead of print. [impact factor 3.724]
 11. Buchheit, M., Laursen, P.B., Al Haddad, H., Ahmaidi, S. Exercise-induced plasma volume expansion and post-exercise parasympathetic reactivation. *European Journal of Applied Physiology*. Nov 14. Epub ahead of print. [impact factor 1.601]
 12. Buchheit, M., Millet, G.P., Parisy, A., Pourchez, S., Laursen, P.B., Ahmaidi, S. (2008) Supramaximal training and post-exercise parasympathetic reactivation in adolescents. *Medicine and Science in Sports and Exercise*. 40(2): 362-371. [impact factor 2.909]
 13. Brughelli, M., Cronin, J. (2008). Influence of running velocity on vertical, leg, and joint stiffness: modelling and recommendations for future research. *Sports Medicine*. 38(8): 647-657. [impact factor 3.504]
 14. Brughelli, M., Cronin, J. (2008). Preventing hamstring injuries in sport. *Strength and Conditioning Journal*. 30(1): 55-64. [impact factor 0.453]
 15. Brughelli, M., Cronin, J. (2008). A review of research on the mechanical stiffness in running and jumping: methodology and implications. *Scandinavian Journal of Medicine and Science in Sports*, 18(4), 417-426. [impact factor 2.295]

16. Brughelli, M., Cronin, J., Levin, G., Chaouachi, A. (2008). Understanding change of direction ability in sport: A review of resistance training studies. *Sports Medicine*. 38(12): 1045-1063. [impact factor 3.504]
17. Burnett, A., Coleman, J. Netto, K. (2008). An electromyographic comparison of neck conditioning exercises in healthy controls. *Journal of Strength and Conditioning Research*. 22: 447-454. [impact factor 1.336]
18. Burnett, A., O'Sullivan, P., Ankarberg, L., Gooding, M., Nelis, R., Offermann, F. Persson, J. (2008). Lower lumbar spine axial rotation is reduced in end range sagittal postures when compared to a neutral spine posture. *Manual Therapy*, 13: 300-306. [impact factor 2.130]
19. Chapman, D., McGuigan, M.R., Newton, M., Nosaka, K. (2008). Comparison between old and young men for responses to fast velocity maximal lengthening contractions of the elbow flexors. *European Journal of Applied Physiology*. 104(3): 531-539. [impact factor 1.601]
20. Chapman, D.W., McGuigan, M.R., Newton, M., Nosaka, K. (2008). Effect of lengthening contraction velocity on muscle damage of the elbow flexors. *Medicine and Science in Sports and Exercise*. 40(5): 926-933. [impact factor 2.909]
21. Chapman, D., Newton, M., Zainuddin, Z., Sacco, P., Nosaka, K. (2008). Work and peak torque during eccentric exercise do not predict changes in markers of muscle damage. *British Journal of Sports Medicine* 42: 585-591. [impact factor 2.233]
22. Chen, T.C., Nosaka, K., Wu, C-C. (2008). Effects of a 30-minute running performed daily after downhill running on recovery of muscle function and running economy. *Journal of Science and Medicine in Sport* 11: 271-279. [impact factor 1.212]
23. Chtara, M., Chaouachi, A., Levin, G.T., Chaouachi, M., Chamari, K., Amri, M., P.B. Laursen, P.B. (2008). Effect of concurrent endurance and circuit resistance training sequence on muscular strength and power development. *Journal of Strength and Conditioning Research*. 22(4): 1037-1045. [impact factor 1.336]
24. Cormack, S., Newton, R.U., McGuigan, M.R. Doyle, T.L.A. (2008). The reliability of various measures obtained during single and repeated countermovement jumps. *International Journal of Sports Physiology and Performance*. 3: 131-144.

25. Cormack, S., McGuigan, M.R. Newton, R.U. (2008). Neuromuscular and endocrine responses of elite players to an Australian Rules Football match. *International Journal of Sports Physiology and Performance*. 3: 359-374.
26. Cormack, S., Newton, R.U., McGuigan, M.R. Cormie, P. (2008). Neuromuscular and endocrine responses of elite players during an Australian Rules season. *International Journal of Sports Physiology and Performance*. 3: 439-453.
27. Cronin, J., Hansen, K., Kawamori, N., McNair, P. (2008). Effects of weighted vests and sled towing on sprint kinematics. *Sports Biomechanics*. 7(2): 160-172. [impact factor n/a]
28. Edwards, C., Tod, D., McGuigan, M. (2008). Self-talk influences vertical jump performance and kinematics in male rugby union players. *Journal of Sports Science*. 26(13): 1459-1465. [impact factor 1.797]
29. Frost, D. M., Cronin, J. B., Levin, G. (2008). Stepping backwards can improve sprint performance over short distances. *Journal of Strength and Conditioning Research*. 22(3): 918-922. [impact factor 1.336]
30. Frost, D. M., Cronin, J. B., Newton, R. U. (2008). Have we underestimated the kinematic and kinetic benefits of non-ballistic motion? *Sports Biomechanics*. 7(3): 372-385. [impact factor n/a]
31. Fujikake, T., Hart, R., and Nosaka, K. (2008). Changes in B-mode ultrasound echo intensity following injection of bupivacaine hydrochloride injection rat hind limb muscles in relation to histological changes. *Ultrasound in Medicine and Biology* Dec 20. Epub before print. [impact factor 1.922]
32. Galvão, D.A., Nosaka, K., Taaffe, D.R., Peake, J., Spry, N., Suzuki, L., Yamaya, K. McGuigan, M.R., Kristjanson, L.J., Newton, R.U. (2008). Endocrine and immune responses to resistance training in prostate cancer patients. *Prostate Cancer and Prostatic Diseases*. 11(2): 160-165. [impact factor 2.024]
33. Galvão, D.A., Taaffe, D.R., Spry, N., Joseph, D., Turner, D., Newton, R.U. (2008). Reduced muscle strength and functional performance in men with prostate cancer undergoing androgen suppression: a comprehensive cross-sectional investigation *Prostate Cancer and Prostatic Diseases*. Oct 14. Epub ahead of print. [impact factor 2.024]

34. Galvão, D.A., Newton, R.U., Taaffe, D.R., Spry, N. (2008). Can exercise ameliorate the increased risk of cardiovascular disease and diabetes associated with androgen deprivation therapy in men with prostate cancer? *Nature Clinical Practice Urology*. 5(6): 306-7. [impact factor 2.104]
35. Galvão, D.A., Spry, N., Taaffe, D.R., Stanley, J., Shannon, T., Rowling, C., Newton, R.U., Prince, R. (2008). Changes in muscle, fat, and bone mass after 36 weeks of maximal androgen blockade for prostate cancer. *British Journal of Urology International*. 102: 44-47. [impact factor: 2.751]
36. Halson, S.L., Quod, M.J., Martin, D.T., Gardner, A.S., Ebert T.R., Laursen, P.B. (2008). Physiological responses to cold water immersion following cycling in the heat. *International Journal of Sports Physiology and Performance*. 3:331-346.
37. Hori, N., Andrews, W.A., Nosaka, K., McGuigan, M.R., and Newton, R.U. (2008). Observation of load-power curves in the hang power clean. *Journal of Australian Strength and Conditioning*. 16(1): 11-19.
38. Hori, N., Andrews, W.A., Kawamori, N., Nosaka, K., McGuigan, M.R., Newton, R.U. (2008). Does performance of weightlifting exercise differentiate performance of jumping, sprinting and change of direction? *Journal of Strength and Conditioning Research*. 22(2): 412-418. [impact factor 1.336]
39. Hori, N., Newton, R.U., Kawamori, N., McGuigan, M.R., Andrews, W.A., Chapman, D., Nosaka, K. (2008), Comparison of weighted jump squat training with and without eccentric braking. *Journal of Strength and Conditioning Research*. 22(1): 54-65. [impact factor 1.336]
40. Kay, A., Blazevich, A.J. (2008). Effect of the duration of static stretching on active and passive moment in the triceps surae. *European Journal of Sports Science*, 8(1): 41-46.
41. Kelly, C.M, Burnett, A.F. Newton, M.J. (2008). The effect of strength training on 3km performance in recreational women endurance runners. *Journal of Strength and Conditioning Research*. 22: 396-403. [impact factor 1.336]
42. Lavender, A., Nosaka, K. (2008). A light load eccentric exercise confers protection against a subsequent bout of more demanding eccentric exercise performed 2 days later. *Journal of Science and Medicine in Sport* 11: 292-298. [impact factor 1.212]

43. Lavender, A., Nosaka, K. (2008). Changes in markers of muscle damage of middle age men following eccentric exercise of the elbow flexors. *Journal of Science and Medicine in Sport* 11:124-31. [impact factor 1.212]
44. Madou, K. H., Cronin, J. B. (2008). The effects of whole body vibration on physical and physiological capability in special populations. *Hong Kong Physiotherapy Journal*. 26: 24-38.
45. Meylan, C., Cronin, J., Nosaka, K. (2008). Isoertial assessment of eccentric muscular strength. *Strength and Conditioning Journal*. 30(2): 56-64. [impact factor 0.453]
46. McGuigan, M.R., Winchester, J.B. (2008). The relationship between isometric and dynamic strength in college football players. *Journal of Sports Science and Medicine*. 7: 101-105. [impact factor 0.290]
47. McGuigan, M.R., Al Dayel, A., Tod, D., Foster, C., Newton, R.U. Pettigrew, S. (2008). Use of session rating of perceived exertion for monitoring resistance exercise in overweight children. *Pediatric Exercise Science*. 20: 333-341. [impact factor 0.761]
48. McGuigan, M.R., Newton, M.J., Winchester, J.B. (2008). Use of isometric testing in soccer players. *Journal of Australian Strength and Conditioning*. 16(4): 11-14.
49. Mitchell, T., O'Sullivan, P., Burnett, A., Straker, L., Rudd, C. (2008). Low back pain characteristics from undergraduate student to working nurse in Australia: A cross-sectional survey. *International Journal of Nursing Studies*. 45: 1636-1644. [impact factor 2.115]
50. Mitchell, T., O'Sullivan, P., Burnett, A., Straker, L., Smith, A. (2008). Regional differences in lumbar spinal posture and the influence of low back pain. *BMC Musculoskeletal Disorders*. 9:152. [impact factor 1.323]
51. Netto, K., Burnett, A., Green, J. Rodrigues, J. (2008). Validation of an EMG-driven, graphically-based isometric musculoskeletal model of the cervical spine. *Journal of Biomechanical Engineering*. 130: 031014-1 – 031014-8. [impact factor 1.591]
52. Newton, R.U., Galvão, D.A. (2008). Exercise in prevention and management of cancer. *Current Treatment Options in Oncology*. 9(2-3): 135-46.

53. Newton, M., Morgan, G.T., Sacco, P., Chapman, D., Nosaka, K. (2008). Comparison between resistance-trained and untrained men for responses to a bout of strenuous eccentric exercise of the elbow flexors. *Journal of Strength and Conditioning Research*. 22: 597-607. [impact factor 1.336]
54. Peake J., Peiffer, J.J., Abbiss, C.R., Nosaka, K., Laursen, P.B., Suzuki, K. (2008). Carbohydrate gel ingestion and immunoendocrine responses to cycling in temperate and hot conditions. *International Journal of Sports Nutrition and Exercise Metabolism*. 18: 229-246. [impact factor 1.019]
55. Peake, J., Peiffer, J. J., Abbiss, C. R., Nosaka, K., Okutsu, M., Laursen, P. B., Suzuki K. (2008). Body temperature and its effect on leukocyte mobilization, cytokines and markers of neutrophil activation during and after exercise. *European Journal of Applied Physiology*. 102(4): 391-401. [impact factor 1.601]
56. Peiffer J.J., Abbiss, C.R., Wall, B.A., Watson, G., Nosaka, K., Laursen, P.B. (2008). Effect of a 5 min cold water immersion recovery on exercise performance in the heat. *British Journal of Sports Medicine*. Jun 6. Epub ahead of print [impact factor 2.233]
57. Peiffer, J. J., Abbiss, C. R., Chapman, D., Laursen, P. B., Parker, D. L. (2008). Physiological characteristics of masters-level cyclists. *Journal of Strength and Conditioning Research*. 22(5): 1434-1440. [impact factor 1.336]
58. Peiffer, J. J., Abbiss, C. R., Watson, G., Nosaka, K., Laursen, P. B. (2008). Effect of cold water immersion on repeated 1-km cycling performance in the heat. *Journal of Science and Medicine in Sport*. ?. Epub ahead of print. [impact factor 1.212]
59. Peiffer J.J., C.R. Abbiss, K. Nosaka, J.M. Peake and P.B. Laursen. (2008). Effect of cold water immersion after exercise in the heat on muscle function, body temperatures, and vessel diameter. *Journal of Science and Medicine in Sport*. Feb 20. Epub ahead of print. [impact factor 1.212]
60. Pua, Y.H., A. Bryant, A., Newton, R.U., Steele, J., Wrigley, T. (2008). Isokinetic dynamometry in anterior cruciate ligament deficiency and reconstruction. *Annals, Academy of Medicine, Singapore*, 37(4): 330-40. [impact factor n/a]
61. Quod, M.J., Martin, D.T., Laursen, P.B., Gardner, A.S., Halson, S.L., Marino, F.E., Tate, M.P., Mainwaring, D.E., Gore, C.J., Hahn, A.G. (2008). Practical precooling: Effect on cycling time trial performance in warm conditions. *Journal of Sports Science*. Oct 23. Epub ahead of print [impact factor 1.797]

62. Ranson, C.A., Burnett, A.F., O'Sullivan, P.B., Batt, M.E. and Kerslake, R.W. (2008). The lumbar paraspinal muscle morphometry of fast bowlers in cricket. *Clinical Journal of Sports Medicine*. 18, 31-37. [impact factor 1.636]
63. Ranson, C.A, Burnett, A.F, King, M., Patel, N., O'Sullivan, P.B. (2008). The relationship between bowling action classification and three-dimensional lumbar spine motion in fast bowlers in cricket. *Journal of Sports Sciences*. 26: 267-276. [impact factor 1.797]
64. Rose, E, Larkin, D, Hands: B, Howard, B, Parker,H. (2008). Evidence for the validity of the children's attraction to physical activity questionnaire (CAPA) with young children. *Journal of Science and Medicine in Sports*. Epub ahead of print. [impact factor 1.212]
65. Sarris, J., Kavanagh, D.J., Newton, R.U. (2008). Depression and exercise. *Complementary Medicine*. May/June: 48-51, 62.
66. Sheppard, J. M., Newton, R.U., McGuigan, M.R. (2008). The effects of depth-jumping on vertical jump performance of elite volleyball players: an examination of the transfer of increased stretch-load tolerance to spike jump performance. *Journal of Australian Strength and Conditioning*. 16(4): 3-10. [impact factor n/a]
67. Sheppard, J.M., Hobson, S., Barker, M., Taylor, K.M., Chapman, D.W., McGuigan, M.R., Newton, R.U. (2008). The effect of training with accentuated eccentric load counter-movement jumps on strength and power characteristics of high-performance volleyball players. *International Journal of Sports Science and Coaching*. 3(3): 355-363. [impact factor n/a]
68. Sheppard, J.M., Cormack, S., Taylor, K., McGuigan, M.R., Newton, R.U. (2008). Assessing the force-velocity characteristics of the leg extensors in well trained athletes: the incremental load power profile. *Journal of Strength and Conditioning Research*. 22(4): 1320-1326. [impact factor 1.336]
69. Sheppard, J.M., Cronin, J., Gabbett, T.J., McGuigan, M.R., Etxebarria, N., Newton, R.U. (2008). Relative importance of strength, power and anthropometric measures to jump performance of elite volleyball players. *Journal of Strength and Conditioning Research*. 22(3): 758-765. [impact factor 1.336]
70. Smart, D., Blazevich, A.J., Gill, N.D. (2008). The relationship between changes in interstitial creatine kinase and game-related impacts in rugby union. *British Journal of Sports Medicine*. 42:198-201. [impact factor 2.233]

71. Sturgess, S., Newton, R.U. (2008). Design and implementation of a specific strength program for badminton. *Strength and Conditioning Journal*. 30(3): 33-41. [impact factor 0.615]
72. Vescovi, J.D., McGuigan, M.R. (2008). Relationship between speed, agility and jump ability in female athletes. *Journal of Sports Science*. 26(1): 97-107. [impact factor 1.797]
73. Winchester J.B., McBride, J.M., Maher, M.A. Mikat, R.P., Allen, B.K., McGuigan, M.R. (2008). Eight-weeks of ballistic resistance exercise improves power independent of changes in strength and muscle fiber type expression. *Journal of Strength and Conditioning Research*. 22(6): 1728-1734. [impact factor 1.336]
74. Yamaya, K., Suzuki, K., Nosaka, K., Ogawa, K., Galvão, D.A., Oksutsu, M., Peake, J., M.R, Newton, R.U. (2008). Effects of resistance training on prostate cancer patients receiving androgen deprivation therapy. *Japanese Journal of Complementary and Alternative Medicine*. 5: 57-63.

Book Chapters (7 publications)

1. Ackland, T.R., D.A. Kerr and R.U. Newton. (2008). Modifying physical capacities. In: *Applied Anatomy and Biomechanics in Sport. 2nd Edition*. Ackland, T.R., Elliott, B.C., Bloomfield, J. (Eds). Human Kinetics, Champaign, Illinois, USA.
2. Cronin, J., Blazevich, A.J. (2008). Speed. In: *Applied Anatomy and Biomechanics in Sport. 2nd Edition*. Ackland, T.R., Elliott, B.C., Bloomfield, J. (Eds). Human Kinetics, Champaign, IL, USA.
3. McGuigan, M., Ratamess, N. (2008). Strength. In: *Applied Anatomy and Biomechanics in Sport. 2nd Edition*. Ackland, T.R., Elliott, B.C., Bloomfield, J. (Eds). Human Kinetics, Champaign, IL USA.
4. Newton, R.U., Laursen, P.B., Young, W.B. (2008). Chapter 4: Clinical Exercise Testing and Assessment of Athletes. In: *The Olympic Textbook of Medicine in Sport*. Volume XIV of the Encyclopaedia of Sports Medicine. IOC Medical Commission Publication. Schwellnus, M.P. (Ed). Blackwell Publishing Ltd., West Sussex, UK.
5. Newton, R.U., Kraemer, W.J. (2008). Maximal Power. In: *Applied Anatomy and Biomechanics in Sport. 2nd Edition*. Ackland, T.R., Elliott, B.C., Bloomfield, J. (Eds). Human Kinetics, Champaign, IL USA.

6. Newton, R.U. (2008). Biomechanics of Conditioning Exercises. Biomechanics of Conditioning Exercises. In: *Conditioning for Strength and Human Performance*. Chandler, T.J., Brown, L.B. (Eds), Lippincott Williams & Wilkins, Baltimore, 2008.
7. Nosaka, K. (2008). Chapter 5: Muscle soreness, muscle damage and repeated bout effect (p.59-76). In: *Skeletal Muscle Damage and Repair* (ISBN 0136058672). Tiidus, P.M. (Ed), Human Kinetics, Champaign, IL, USA.

CONFERENCE PRESENTATIONS

62 presentations in total

1. Blazevich, A.J., Cannavan, D., Horne, S., Coleman, D., Aagaard, P. Influence of strength training-induced fascicle lengthening on contractile rate of force development in the human quadriceps. Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008. < Winner of Best Oral Presentation >.
2. Blazevich, A.J., Cannavan, D., Horne, S., Coleman, D., Aagaard, P. Does strength training-induced fascicle lengthening affect contractile rate of force development in the human quadriceps? 13th Annual Congress of the European College of Sports Sciences, Estoril, Portugal, 9-12 July 2008.
3. Blazevich, A.J. Interventions for altering muscle-tendon stiffness in athletes. *Conference of the British Association of Sport and Exercise Sciences*, Brunel University, London, UK, 2-4 September 2008. <Invited Speaker >
4. Brughelli, M.E., Cronin, J.B. Effects of previous training on muscle physiology and architecture. National Strength and Conditioning Conference, Las Vegas, USA, 9-12 July 2008.
5. Brughelli, M.E., Kinsella, D., Cronin, J.B. Contribution of vertical and horizontal force production to running velocity. National Strength and Conditioning Conference, Las Vegas, USA, 9-12 July 2008.
6. Buchheit M., Laursen, P.B., Renaud, C., Ruch, D., Kuhnle, J., Ahmaidi. S. Effects of running versus specific aerobic training in elite handball players. Verona-Ghirada Team Sport Conference, Monaco, 7-8 June 2008.

7. Burns J., Watson G., Peiffer J.J., Abbiss C.R., Laursen P.B. Does training with PowerCranks™ change economy of motion, cycling efficiency, oxygen uptake and muscle activation patterns in trained cyclists? Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008.
8. Chapman, D.W., Newton, M., McGuigan, M, Nosaka, K. Protective effect conferred by slow velocity lengthening contractions against muscle damage induced by fast velocity lengthening contractions. 13th Annual Congress of the European College of Sports Sciences, Estoril, Portugal, 9-12 July 2008.
9. Cormie, P., M.R. McGuigan and R.U. Newton. The influence of initial strength level on the ability to adapt to power training. 6th International Conference on Strength Training, Colorado Springs, Colorado, USA, 30 October – 2 November 2, 2008.
10. Cormie, P., M.R. McGuigan and R.U. Newton. The impact of strength training versus power training on the force-velocity relationship in the jump squat. 6th International Conference on Strength Training, Colorado Springs, Colorado, USA, 30 October – 2 November 2, 2008.
11. Cronin, J., Brughelli, M., Andrews, W., Kinsella, D. Contribution of vertical and horizontal force production to running velocity. NZ Sports Medicine and Science Conference, Dunedin, 13-15 November 2008.
12. Doyle, T.L.A., Andrews, W.A., Dawson, B., Newton, R.U. Functionally assessing bi-lateral differences and general effects of fatigue during a sport specific running protocol. 2nd World Congress on Sports Injury Prevention, Tromso, Norway, 2008.
13. Fragala, M.S., Keuning, M, Gordon, S.E., Gomez, A.L., Vingren, J.L., Maresh, C.M., Volek, J.S., Hatfield, D.L., Ho, J., Thomas, G.A., Hopkins, A.K., Newton, R.U., Hakkinen, K., Anderson, J.M., Kraemer, W.J. Effects of step-aerobics with resistance exercise on salivary cortisol and testosterone concentrations in women. National Strength and Conditioning Conference, Las Vegas, USA, 9-12 July 2008.
14. Frost, D.M., Cronin, J.B., Newton, R.U. Decomposing the “optimal load” for power development – does it exist and/or should it be modified. National Strength and Conditioning Conference, Las Vegas, USA, 9-12 July 2008.

15. Fujikake, T., Nosaka, K. Changes in B-mode ultrasound echo intensity following injection of bupivacaine chloride to rat hind limb muscles Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008.
16. Galvão, DA. Exercise and reduction of treatment side effects in prostate cancer patients. Vario Health Conference - Physical and Mental Wellness. Perth, 1-2 December 2008. <Invited Speaker>
17. Galvão, DA. Resistance exercise in men receiving androgen deprivation therapy for prostate cancer. PhD Award invited presentation. Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008. <Invited Speaker>
18. Galvão, DA. Exercise for men receiving treatment for prostate cancer. The Cancer Council of Western Australia 50th Anniversary Research Dinner. Perth, March 2008. <Invited Speaker>
19. Galvão, DA., D.R Taaffe, N. Spry, Spry N, Joseph D, and R.U. Newton. Resistance and aerobic exercise reverses muscle loss in hypogonadal prostate cancer patients: a randomized controlled trial. The Cancer Council of Western Australia Conference. Perth, 23 October 2008.
20. Galvão, DA., Taaffe, D.R., Spry, N., Turner, D., Smith, K., Gibbs, Z., Newton, R.U. Altered body composition and poorer muscle strength and functional performance in men with prostate cancer undergoing androgen deprivation. Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008.
21. Gibbs Z., Newton, R.U., Galvão, D. A., Turner, D., Smith, K. Resistance training in older adults: A comparison between group-and home-based exercise training for improvements in functional performance, muscle function, and balance. Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008.
22. Harris, N. K., Cronin, J. B., Hopkins, W. G., Hansen, K. T. Inter-relationships between machine squat-jump strength, force, power and sprint ability. 6th International Conference on Strength Training, Colorado Springs, Colorado, USA, 30 October – 2 November 2, 2008.

23. Hands, B., Larkin, D., Parker, H., Rose, E. *DCD in teenagers: Co-occurring diagnosed problems, self-perceptions and health-related fitness*. The Western Australian Pregnancy Cohort (Raine) Study Annual Scientific Day. Vines Resort and Country Club. 24 November 2008.
24. Harris, N.K., Cronin, J.B., Hopkins, W.G. and Hansen, K.T. Inter-relationships between machine squat-jump strength, force, power and sprint ability. NZ Sports Medicine and Science Conference, Dunedin, 13-15 November 2008.
25. Hori, N., R.U. Newton, N. Kawamori, M.R. McGuigan, W.J. Kraemer and K. Nosaka. Reliability of performance measurements derived from ground reaction force data during countermovement jump and the influence of sampling frequency. National Strength and Conditioning Conference, Las Vegas, USA, 9-12 July 2008.
26. Jubeau, M., Muthalib, M., Millet, G.Y., Maffiuletti, N.A., and Nosaka, K. Comparison between electrically evoked and voluntary isometric contractions of the elbow flexor muscles for central and peripheral fatigue. 13th Annual Congress of the European College of Sports Sciences, Estoril, Portugal, 9-12 July 2008.
27. Larkin, D., Hands, B., Parker, H., Rose, E. *Difficulties with the Recognition of Motor Coordination Problems*. 36th Annual Meeting of the International Neuropsychological Society in Waikoloa, Hawaii, USA, 6-9 February 2008.
28. Lau, W.I., and Nosaka, K. Effect of vibration treatment on symptoms associated with eccentric exercise-induced muscle damage. Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008.
29. Laursen, P.B., Alameh, K., Vasiliev, M., Elliott, N.C.R. Microstructured arrayed microfluidic waveguide structure for infrared radiation focusing and transfer, In Proceedings, IEEE GlobalPhotonics@Singapore 2008 Conf., Singapore, 8-11 December 2008.
30. McGuigan, M.R. Exercise and Child Obesity. Vario Health Conference. Perth, 1 December 2008.
31. McGuigan, M.R. Resistance training for overweight youth. Western Australia Fitness Industry Conference. Perth, 19 January 2008.

32. Muthalib, M., Jubeau, M., Millet, G.Y., Maffiuletti, N.A., and Nosaka, K.
Comparison between voluntary and electrically evoked isometric contractions for muscle oxygenation and blood volume of the biceps brachii muscle. 13th Annual Congress of the European College of Sports Sciences, Estoril, Portugal, 9-12 July 2008.
33. Newton, R.U., D. Turner, Z. Gibbs, K. Smith, N. Spry, D.R Taaffe and Galvão, DA. Exercise improves muscle function, physical performance and body composition in cancer patients. Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008.
34. Newton, R.U. Exercise as medicine in the prevention and management of chronic disease. 12th Annual Conference of the Chronic Diseases Network of the NT and 18th Annual Scientific Meeting and Exhibition of the Australian Cardiovascular Health and Rehabilitation Association. Alice Springs, 13-15 August 2008. <Key Note>
35. Newton, R.U. Exercise and older people: the need to pump iron. Australian Association of Gerontology 41st National Conference - Ageing Landscapes, Fremantle, Western Australia, 18-21 November 2008. <Invited Speaker>
36. Newton, R.U. Exercise as Medicine in the Management of Scleroderma and Prevention of Chronic Disease. Western Australia Scleroderma, Arthritis House, Shenton Park, 23 September 2008. <Invited Speaker>
37. Newton, R.U. Exercise as Medicine for Prostate Cancer. Prostate Cancer Forum, Westmead Hospital, Sydney, 26 August 2008. <Invited Speaker>
38. Newton, R.U. Exercise for the prevention and management of dementia. WA Dementia Training Study Centre for Health-Care Professionals - Dementia Networking Series, Perth, 21 August 2008. <Invited Speaker>
39. Newton, R.U. Exercise and Chronic Disease. "Health At The Heart Of Australia" Conference. 12th Annual Conference of the Chronic Diseases Network of the NT & 18th Annual Scientific Meeting and Exhibition of the Australian Cardiovascular Health and Rehabilitation Association, Alice Springs Convention Centre, 13-15 August 2008. <Invited Speaker>

40. Newton, R.U. Exercise as Medicine for Prostate Cancer. Memorial Sloan Kettering Hospital – Grand Rounds, New York City, 16 July 2008. <Invited Speaker>
41. Newton, R.U. Assessment and monitoring of athlete strength and power. National Strength and Conditioning Conference, Las Vegas, USA, 9-12 July 2008. <Invited Speaker>
42. Newton, R.U. PCFA Funded Research in WA for all Australian Men - Exercise as Medicine for Cancer. Prostate Cancer Foundation of Australia – Men’s Health Promotion Forum, Canberra, 31 May 2008. <Invited Speaker>
43. Newton, R.U. Exercise as medicine for the management of chronic disease. National Strength and Conditioning Association – European Conference 2008, Amsterdam, 28-29 April 2008.
44. Newton, R.U. Assessment and monitoring of athlete strength and power. National Strength and Conditioning Association – European Conference 2008, Amsterdam, 28-29 April 2008.
45. Newton, R.U. Assessment and monitoring of athlete strength and power. Presentation to South Australian Chapter of AAESS. Port Power Football Club, Adelaide, 1 April 2008.
46. Newton, R.U. Exercise management of chronic disease. Presentation to South Australian Chapter of AAESS. University of South Australia, Adelaide, 31 March 2008.
47. Newton, R.U. and D. Iverson. Exercise therapy post cancer diagnosis. Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008.
48. Newton, R.U. Exercise for the Prevention and Management of Dementia. Dementia Networking Workshop, Curtin University, Perth, 11th March 2008.
49. Newton, R.U. Exercise for the Prevention and Management of Dementia. Dementia Networking Workshop, Curtin University, Perth, 27th February 2008.
50. Ng, L., Burnett, A. O’Sullivan, P. Gender differences in motor control of the trunk during prolonged ergometer rowing. XXVI International Conference on Biomechanics in Sports, Seoul National University, South Korea, 2008.
51. Ng, L., Burnett, A. and O’Sullivan, P. Spino-pelvic kinematics and trunk muscle activation in prolonged ergometer rowing: Mechanical etiology of non-specific low back pain in adolescent rowers. XXVI International Conference on Biomechanics in Sports, Seoul National University, South Korea, 2008.

52. Nosaka, K. Every muscle contraction counts. Sport Medicine Australia, Sir Charles Gardiner Hospital, 11 March 2008.
53. Nosaka, K., and Chen T. Attenuation of eccentric exercise-induced muscle damage by isometric exercise. Congress of the Australian Association for Sport and Exercise Science, Australian Catholic University, Melbourne, 27-30 March 2008.
54. Nosaka, K., Chapman, D.W., Newton, M., McGuigan, M. Protective effect conferred by slow velocity lengthening contractions against muscle damage induced by fast velocity lengthening contractions. 13th Annual Congress of the European College of Sports Sciences, Estoril, Portugal, 9-12 July 2008.
55. Nosaka, K. Muscle damage and neuromuscular adaptations to resistance training. 23rd Brazilian Federation of Experimental Biology Meeting, Aguas de Lindoia, Brazil. 20-23 August 2008. <Invited Speaker>
56. Phillips M., Abbiss C.R., Payne W., Nichols D., Aisbett B. (2008) Important fitness components for successful pack hike performance. International Bushfire Research Conference. Adelaide, Australia.
57. Raines J., Snow, R., Abbiss C.R., Nichols D., Aisbett B. (2008) Dehydration in Australian bush fire fighters across consecutive shifts. International Bushfire Research Conference. Adelaide, Australia.
58. Ranson, C., Burnett, A., King, M. O'Sullivan, P., Cornish, R. Batt, M. (2008). Acute lumbar stress injury, trunk kinematics, lumbar MRI and paraspinal muscle morphology in fast bowlers in cricket. XXVI International Conference on Biomechanics in Sports, Seoul National University, South Korea, 2008.
59. Rose, E., Larkin, D., Hands, B., Parker, H., *Can adolescents with DCD accurately identify their ability on specific skills? Do their physical self-descriptions reflect their actual motor competence?* European Congress for Adapted Physical Activity, Torino, Italy, 9-11 October 2008.
60. Sheppard, J.M., D.W. Chapman, R.U. Newton, and M.R. McGuigan. The association between improvements in strength and power qualities and vertical jump ability in elite volleyball players over one year. National Strength and Conditioning Conference, Las Vegas, USA, 9-12 July 2008.

61. Sheppard, J.M., R.U. Newton, and M.R. McGuigan. The effects of increased strength load tolerance vertical jump performance of elite volleyball players. National Strength and Conditioning Conference, Las Vegas, USA, 9-12 July 2008.
62. Taylor, K., Mitchell, J. Cronin, J.B. Diurnal variation associated with dynamic power output and variability in performance. NZ Sports Medicine and Science Conference, Dunedin, 13-15 November 2008.

RESEARCH STUDENT COMPLETIONS

15 completions in total

PhD (5 completions)

- Stuart Cormack “Neuromuscular fatigue and endocrine responses in elite Australian Rules football players” (Supervisors: Rob Newton, Mike McGuigan)
- Chris Abbiss “Dynamic pacing strategies during endurance cycling” <Winner of Faculty Research Medal: best research thesis in Faculty and University Medal: best research thesis in University) (Supervisors: Paul Laursen)
- Dale Chapman “Lengthening contraction velocity and exercise-induced muscle damage of the elbow flexors in humans” (Supervisors: Ken Nosaka, Mike McGuigan, Mike Newton)
- Jeremiah Peiffer “Short term recovery with cold water immersion following cycling in the heat” (Supervisors: Paul Laursen, Ken Nosaka, Greig Watson)
- Naoki Kawamori “Sprint acceleration performance in team sports: Biomechanical characteristics and training methods” (Supervisors: Rob Newton, Ken Nosaka)

Masters by Research (8 completions)

- David Kinsella “Acute physiological and performance effects of a high intensity lower body resistance training session on Australian Rules football players” (Supervisors: Rob Newton, Daniel Galvão, Darryl Turner)
- Ben Piggott “The relationship between training load and incidence of injury and illness over a pre-season at an Australian Football League club” (Supervisors: Rob Newton, Daniel Galvão, Darryl Turner)

- Melissa Tatasciore “The effect of different resistance training interventions in overweight and obese children” (Supervisors: Rob Newton, Daniel Galvão, Darryl Turner)
- Greg Levin “The influence of concurrent strength and endurance training on cycling performance and physiological variables” (Supervisors: Paul Laursen, Mike McGuigan)
- Bradley Wall “Effects of exercise-induced hypohydration on body temperature and cycling time-trial performance in the heat with adequate facing windspeed” (Supervisors: Paul Laursen, Greig Watson)
- Jack Burns “Does training with PowerCrank™ modify motor recruitment patterns, economy of motion, cycling efficiency and cycling performance in trained cyclists?” (Supervisors: Paul Laursen)
- Zoe Gibbs “Resistance training in older adults: a comparison between group-and home-based exercise for improvements in functional performance, muscle function and balance” (Supervisors: Rob Newton, Daniel Galvão, Darryl Turner)
- Adam Beard: “The load that maximises the mechanical power output in the power clean: A comparison between different relative strength levels” (Angus Burnett, Rob Newton)

Honours (2 completions)

- Mirza Abdul Latif “The relationship between session rate of perceived exertion measures and the volume load of resistance training” (Supervisors: Mike McGuigan, Mike Newton)
- Lilian Min Yen Chye “Modulation of corticomotor excitability during passive and active wrist flexion and extension” (Supervisors: Ken Nosaka, Gary Thickbroom)

AWARDS

- Daniel A. Galvão. Australia Association for Exercise and Sports Science (AAESS) Medal for most outstanding PhD Thesis in Australia (2008)
- Daniel A. Galvão. Edith Cowan University Vice-Chancellor’s Award for Research by Early Academics (2008)

- Ken Nosaka. Edith Cowan University Vice-Chancellor's Award for Excellence in Research Supervision (2008)
- Ken Nosaka. ECU Faculty of Computing, Health and Science Executive Dean's Award (2008)

EXPERT EVALUATIONS OF ACADEMIC THESES

- Burnett, A. Examination of Masters Thesis, Amanda McKee, University of Auckland Thesis topic: The relationship between trunk stability measures and ankle stability measures. April 2008.
- Burnett, A. Examination of Doctor of Philosophy Thesis, Aaron Chin, University of Western Australia. Thesis topic: Anatomical and Functional Based Upper Limb Models: Methods for Kinematic Analysis of Cricket Spin Bowling. December 2008.
- Galvão, D.A. Examination of Doctor of Philosophy Thesis, Amanda Lee Foley, University of South Australia. Thesis topic: A randomized controlled trial comparing the effectiveness of different exercise frequencies for maintaining rehabilitation outcomes for older adults. August 2008.
- McGuigan, M.R. Examination of Masters Thesis. Simon Dannapfel, Waikato Institute of Technology. Thesis topic: The acute effect of prolonged intense cycling and blackcurrant extract on protein carbonyls in well trained male cyclists. July 2008.
- McGuigan, M.R. Examination of Doctor of Philosophy Thesis, Jill Borreson, University of Cape Town. Thesis topic: Quantifying training load and its relationship to heart rate recovery, April, 2008.
- Laursen, P. Honours Thesis – Lilian Min Yen Chye, Edith Cowan University. Thesis topic: Modulation of corticomotor excitability during passive and active wrist flexion and extension. September 2008.
- Newton, M. Examination of Doctor of Philosophy Thesis, Amanda Lee Foley, University of South Australia. Thesis topic: A randomized controlled trial comparing the effectiveness of different exercise frequencies for maintaining rehabilitation outcomes for older adults. August 2008.

STRATEGIC RESEARCH ALLIANCES

*Newly established alliances in 2008 are shown in bold.

- Appalachian State University (USA)
- Australian Institute of Aviation Medicine
- Australian Institute of Sport
- Centre for Neuromuscular and Neurological Disorders (UWA)
- Clinical Associate Professor Nigel Spry (University of Western Australia)
- Cycling Australia
- Disability and the Arts: Disadvantage and the Arts Western Australia
- Dr. Jonathan Peake (University of Queensland)
- Dr. Bill Sheel (University of British Columbia, Canada)
- Dr. Dennis R. Taaffe (The University of Queensland)
- Dr. Helen Slater (Curtin University)
- Dr. Katsuhiko Suzuki (Waseda University, Japan)
- Dr. Marc Jubeau (Université de Bourgogne, France)
- Dr. Thanasis Jamurtas (University of Thessaly, Greece)
- Dr. Trevor Chen (National Chiayi University, Taiwan)
- **Dr. Prasartwuth, Dr. Paungmali (Chiang Mai University, Thailand)**
- **Dr. Aoki, Dr. Toricoli (University of Saõ Paulo, Brazil)**
- **Professor Millet (University Jean Monnet, France)**
- Professor Kamal Alameh – COMPS, ECU
- Professor Nadine Henly – SMTL, ECU
- **Dr. Hingston, Dr. Masek – SCSIS, ECU**
- **English Cricket Board**
- Recreation Network. Western Australia: Department of Sports and Recreation
- Singapore Sport School
- **Singapore Sport Council**
- **STAR Sport Alliance – Singapore Sports School, Bath University, Leeds Metropolitan University, University of Wales in Cardiff, AUT University**
- The College of New Jersey (USA)
- United States Air Force

- United States Olympic Training Centre (USA)
- United States Ski and Snowboard Association (USA)
- University of Calgary
- University of Connecticut (USA)
- University of Edinburgh (UK)
- University of New Mexico (USA)
- University of Notre Dame, Australia, Department of Sport and Recreation
- University of Verona
- West Australian Institute of Sport

VISITING RESEARCH FELLOWS

- Dr. Marc Jubeau: September 2007 – March 2008. Researcher, Laboratory INSERM U887, Motricity Plasticity, Faculty of Sports Science, University of Burgundy, France
- Professor Guillaume Millet: November 2007 – May 2008. Professor, PPEH Research Unity, University Jean Monnet, Saint-Etienne, France
- Dr. Hoseong Lee: June 2008 – February 2009. Research Associate, The Sport Science Institute of Dankook University, South Korea

MEDIA COVERAGE

- Newton, R. ABC Radio, Alice Springs, Drive Time Show – Exercise and Health. August 2008.
- Newton, R. Channel 30 – Wakeup Show, “Exercise and health” 17th April 2008.

PATENTS

- Laursen, P., Alameh, K., Vasiliev, M., Newton, M. “Heat transfer fabric”, Australian Provisional Patent, April 2008.

OTHERS

- Blazevich, A., Organiser, Invited Syposium: Biomechanics of Performance. Brunel University, London UK, 2-4 September 2008.
- Burnett, A. Chair of the Scientific Committee - 3rd Australian Association for Exercise and Sports Science Conference, Melbourne, April 2008.