

Resume
Jason Harding
BEXSC PhD

2010

Jason Harding is a high level surfer, and snowboarder. He is also a sport scientist (PhD) formerly affiliated with the Australian Institute of Sport (AIS), the Olympic Winter Institute of Australia (OWIA) and Griffith University's Centre For Wireless Monitoring and Applications (GU). Jason is the founder of 'Anarchist Athlete', a company focused on providing quality performance based knowledge and advice to talented athletes.

www.AnarchistAthlete.com

PERSONAL DETAILS

Name: Jason William Harding
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Linked-In Profile: <http://www.linkedin.com/in/jasonharding>

Academic Qualifications: *Doctor of Philosophy (PhD) Sport Science*
Australian Institute of Sport
Olympic Winter Institute of Australia
Griffith University
(See Attached PhD Summary)

Post Graduate Scholarship Sport Science
Department of Physiology
Australian Institute of Sport

Bachelor of Exercise Science, (Honours)
First Class
Griffith University

Bachelor of Exercise Science
Griffith University

Senior High School Certificate
Brisbane State High School

Skill Based Accreditation: *Level Two Anthropometrist (ISAK Accredited)*
Australian Institute of Sport

Blood Withdrawal Using Venipuncture Techniques
Australian Institute of Sport

Level One Strength and Conditioning Coach
Australian Strength and Conditioning Association

St. Johns Senior First Aid Certificate
Australian Institute of Sport

Personal Interests: Surfing, Snowboarding, Skateboarding, Art, Writing, Photography, Videography, Website Development

BRIEF SUMMARY OF SKILLS AND PROFESSIONAL EXPERIENCE

- Highly self motivated with the capacity to think outside the square
- Exemplary problem solving skills and ability to deal with high pressure situations
- Ability to work on own initiative as well as lead and collaborate as part of a team
- Exceptional, adaptable, and established written and verbal communication skills
- Outstanding computer literacy and information technology skills
- Exemplary knowledge of scientific methods, statistical analysis, and data management
- A wealth of experience using computer software specific to scientific research
- Proven practical experience working with elite level coaches and athletes
- Exceptional ability in customising and integrating sports monitoring technologies
- Strong ability to coordinate events (See Attached AIS Pipe Challenge Summary)
- Exceptional ability to shift between hands on and administrative roles
- A wealth of experience in and knowledge of the high performance sporting sector
- Ability to devise practical projects and lead professional teams to generate outcomes
- Proven ability to successfully liaise with and influence key stakeholders and funding bodies
- Significant experience in targeted and co-ordinated high performance approaches
- A wealth of experience collaborating with media interests (See Attached Media Summary)

CAREER OBJECTIVES

- To enhance the policies with which sporting institutes provide support services to athletes
- To develop elite, sanctioned sporting events that successfully incorporate sport science research, reliable judging criteria and augmented athlete feedback
- To set up long-term talent identification and novel athlete development pathways for young athletes that maximise their competitive and personal success
- To enhance the relationship between sport science and athletes striving for success
- To revolutionise training and competition performance assessment by using technology
- To vigorously promote extreme sports as legitimate Olympic disciplines and to assist the practice community with control over any introduction

ACADEMIC AND PROFESSIONAL AWARDS

- WINNER
ISPO Technological Innovation Challenge – Competitive Sports Category 2007
ISPO Germany
- WINNER
Post Graduate Scholarship (Quality Assurance) 2004
Australian Institute of Sport
- WINNER
Award for Academic Excellence for Studies in the Field of Exercise Science – ‘School of Physiotherapy and Exercise Science Honours Scholarship’ 2003
Griffith University Gold Coast
- WINNER
Award for Academic Excellence for Studies in the Field of Exercise Science (Honours) 2003
Griffith University Gold Coast
- WINNER
Health Group Scholarship ‘Service to Health and Exercise Science at Griffith University’ 2003
Griffith University Gold Coast
- WINNER
Award for Academic Excellence for Studies in the Field of Exercise Science 2002
Griffith University Gold Coast

CULTURAL AWARDS

- WINNER
Cultural Club Administrator of the Year (Sand-boarders Club) 2003
Griffith University Gold Coast
- WINNER
Best Short Film 2003, ‘Freedom from Choice’
GUGC Student Guild Tertiary Art Prize
- WINNER
Best Short Film 2002, ‘Ride’
GUGC Student Guild Tertiary Art Prize
- WINNER
Best Photographic Work 2000, ‘The Isolation of Ostracism’
GUGC Student Guild Tertiary Art Prize
- WINNER
Best Two Dimensional Painting 2000, ‘A City of Intoxication’
GUGC Student Guild Tertiary Art Prize

EMPLOYMENT HISTORY

- 12/2008 – 04/2010
Freelance Sport Science Consultant, Website Developer, Sports Photographer
Anarchist Athlete, Jervis Bay

For approximately the past year and a half I have worked privately as a sport science consultant for a number of developmental and elite level surfers, snowboarders, and board-riding coaches; providing knowledge, advice and guidance on physical training, performance assessment techniques, innovative technological concepts, beneficial training products, sponsorships and promotion. Additionally, I developed, administered and maintained (and still do to this day) a number of websites / blogs for small companies focussed on board-riding, shaping and art. I have also been working as a freelance photographer, videographer and video editor for surfers, skaters and snowboarders. During this period I have continued to publish a number of performance-based sport science articles in peer reviewed academic journals, conduct, write, and publish a number of elite rider interviews, and additionally administer my own website focussed on the publication of innovative performance based information tailored specifically for board-riding sports such as surfing, skateboarding and snowboarding.

- 02/2005 – 12/2008
Sport Science Coordinator for Australian Olympic Winter Sports
Australian Institute of Sport, Canberra

I created this and a PhD Research Scholar (Winter Sports) position whilst undertaking a one-year post-graduate scholarship within the Department of Physiology, AIS in 2004. In this particular instance I identified a crucial need within a particular sports community and was able to secure both the cooperation and financial support of numerous key stakeholders. The resultant positions enabled two specific sporting communities (Australian snowboarding and Australian mogul skiing) access to enhanced sport support services and performance-based research. I am extremely well versed and very successful in identifying areas for improvement and influencing positive change within high performance sports programs. Through this position I was able to coordinate and enhance all sport science and sports medicine services provided to the Australian snowboard and mogul skiing teams. Furthermore, I was able to personally secure and manage approximately \$80,000 - \$100,000 in government grant funding, in-kind industry assistance and sponsorship to execute applied research projects and general support for elite sporting teams.

- 07/2007
Elite -Level Event Coordinator, Australian Institute of Sport
Australian Institute of Sport, Canberra
(See Attached AIS Micro-Tech Pipe Challenge Summary)

In 2007 I designed and conducted an invitational half-pipe snowboarding competition as the culmination of numerous performance-based projects conducted with the Australian Snowboard Team. The project focussed on using innovative, technological concepts to assess performance during snowboard competition (the first competition of its kind in the world). The event and its success is a direct example of my ability to design, fund, manage and conduct collaborative projects / events that are focussed on elite sport and to build strong relationships with key external stakeholders, community members and

funding bodies. This event brought together the skills and strengths of sports institutes, industry partners and a multitude of staff, community members and key stakeholders. I won an international award for this work (2008 ISPO Innovation Challenge, Competitive Sports Category).

- 02/2005 – 12/2008
PhD Research Scholar, Australian Olympic Winter Sports
Australian Institute of Sport, Canberra
(See Attached PhD Summary)

My focus throughout my PhD candidature was to enhance athletic performance of the Australian Snowboard and Australian Mogul Skiing Teams (by whatever means necessary) and additionally enhance athletic performance assessment techniques currently used in training and competition by using wearable technologies to calculate objective information related to performance (i.e. by developing and integrating a form of sport specific automated objectivity; see attached PhD summary). I subsequently have significant, demonstrable knowledge of the high performance sport sector and athlete development theories and I am passionate about the link between planning, performance based projects and elite competitive success. Furthermore, I was in charge of designing, managing and conducting regular training camps, fitness testing procedures, performance-based research (nationally and internationally), for Australia's elite snowboarders and skiers and putting best practice high performance concepts and athlete development theories into play at the highest level. Although my focus throughout this time was elite-level winter sport, I have significant experience working with a multitude of summer and winter Olympic sporting disciplines and have since begun exploring the potential of utilising the concept of automated objectivity (as promoted in my PhD) to be used within elite-level surfing and skateboarding.

- 12/2003 - 02/2005
Quality Assurance Officer, Department of Physiology
Australian Institute of Sport, Canberra

As the Quality Assurance Officer for the Department of Physiology at the Australian Institute of Sport, I was in charge of providing continuous departmental commitment towards accurate, precise, and reliable physiological and biochemical testing of Australia's elite athletes. Subsequently, I maintained the exercise testing standards set by the Laboratory Standards Assistance Scheme (LSAS), achieved by the Department of Physiology, and demanded by Australia's best athletes and sports scientists. My focus throughout this time was to guide and implement new quality assurance programs aimed at raising the standard and reliability of exercise testing within the Department of Physiology, Australian Institute of Sport, and in addition, that required by all exercise physiology laboratories within Australia.

- 03/2001 – 12/2003
University Educator (Neuroscience, Biophysics, Maths for Clinical Science)
Griffith University, Gold Coast

As a university educator, I conducted tutorials and practical laboratory sessions focussed on biophysics, mathematics for clinical sciences and neuroscience for first, second and third year Bachelor of Exercise Science and Bachelor of Physiotherapy students. I undertook these contractual roles whilst completing my own Bachelor of Exercise Science and Bachelor of Exercise Science Honours degrees.

PUBLICATIONS

- Harding JW, James DA. (2010) *Performance Analysis During Three Years of The Burton Open Australian Half-Pipe Championships*. International Journal of Performance Analysis; 10 (1), 47-53.
- Harding JW. (2010) *The Ben Mates Interview*. www.AnarchistAthlete.com 10th February.
- Harding JW, James DA (2010) *Performance Assessment Innovations For Elite-Level Half-Pipe Snowboarding*. The Engineering of Sport 8.
- Harding JW, (2010) *Analysis of Snowboarding Performance In FIS Half-Pipe Competition*. (In Press) www.AnarchistAthlete.com
- Harding JW, (2010) *A Few Words With Alex 'Chumpy' Pullin*. (In Press) www.AnarchistAthlete.com
- Harding JW, (2010) *Flipping The Bird With Andrew Burton*. (In Press) www.AnarchistAthlete.com
- Harding JW, Mackintosh CG, Martin DT, Hahn AG, James DA (2009) *Automated Scoring for Elite Half-Pipe Snowboard Competition - Important Sporting Development or Techno Distraction?* Sports Technology; 1 (6), 277 – 290.
- Harding JW, James DA. (2009) *Fusion of Technological Objectivity into the Underlying Anarchy of Elite Snowboarding - Insights from the Australian National Snowboard Coach*. Sports Technology; 1 (6), 239 – 248.
- Harding JW, Mackintosh CG, Hahn AG, James DA (2008) *Classification of Aerial Acrobatics in Elite Half-Pipe Snowboarding Using Body Mounted Inertial Sensors*. The Engineering of Sport 7; Vol. 2, 447 – 456.
- Harding JW, Toohey K, Martin DT, Hahn AG, James, D. A (2008) *Technology and Half-Pipe Snowboard Competition - Insight From Elite-Level Judges*. In The Engineering of Sport 7; Vol. 2, 467 – 476.
- Harding JW, Small JW, James DA (2007) *Feature Extraction of Performance Variables in Elite Half-Pipe Snowboarding Using Body Mounted Inertial Sensors*. BioMEMS and Nanotechnology III 2007; 679917.
- Harding JW, Toohey K, Martin DT, Mackintosh C, Lindh AM, James DA (2007) *Automated Inertial Feedback For Half-Pipe Snowboard Competition And The Community Perception*. The Impact of Technology on Sport II 2007; 20, 845 – 850.

You can read and download all of these articles in full at www.AnarchistAthlete.com

Click [HERE](#) to be redirected to the page that specifically details the abstracts associated with each article and additionally how to read and download all articles contained within this website.

CONFERENCE PRESENTATIONS

- Harding JW, James DA (2010) *Performance Assessment Innovations For Elite Snowboarding*. Paper accepted to be presented at the 8th Conference Of The International Sport Engineering Association, Vienna Austria, July.
- Harding JW, (2008). *Technology And Sports Performance - A Case Study In Practical Application*. Paper given at the 2nd Annual Evolution of The Athlete Coach Education Conference, Brisbane Australia, 28 October.
- Harding JW, Toohey K, Martin DT, Hahn AG, James DA. (2008) *Technology And Half-Pipe Snowboard Competition - Insight From Elite-Level Judges*. Paper given at the 7th Conference Of The International Sport Engineering Association, Biarritz France, 2 June.
- Harding JW, Mackintosh CG, Hahn AG, James DA. (2008) *Classification of Aerial Acrobatics In Elite Half-Pipe Snowboarding Using Body Mounted Inertial Sensors*. Paper given at the 7th Conference Of The International Sport Engineering Association, Biarritz France, 2 June.
- Harding JW, Small JW, James DA. (2007) *Feature Extraction of Performance Variables in Elite Half-Pipe Snowboarding Using Body Mounted Inertial Sensors*. Paper given at the SPIE Micro-electronics, MEMS and Nanotechnology Conference, Canberra Australia, 4 - 7 December, abstract number 6799-46.
- Harding JW. (2007) *Automated Objective Judging In Elite Half-Pipe Snowboard Competition - The Sport's Future Or An Unrealistic Delusion*. Paper given at the NESC Physiology Conference, Brisbane Australia, 25th October.
- Harding JW, Toohey K, Martin DT, Mackintosh CG, Lindh AM, James DA. (2007) *Automated Inertial Feedback For Half-Pipe Snowboard Competition And The Community Perception*. Paper given at the Asia Pacific Congress on Sport's Technology (APCST) Conference, Singapore, 27 September.
- Harding JW. (2007) *Automated Inertial Feedback for Elite Half-pipe Competition and the Community Perception*. Paper given at the AIS Smart Talk, Canberra Australia, 11th July.
- Harding JW, Mackintosh CG, Martin DT, Rosemond D, Dowlan S, James DA, (2006) *Applications for inertial sensors in elite-level half-pipe snowboarding*. Paper given at the 17th Biennial Congress of the Australian Institute of Physics, Brisbane Australia, 8 December, abstract number 484.
- Harding JW. (2006) *Applications of inertial sensors in elite-level winter sport - Immediate training feedback and influence on current subjective judging protocols*. Paper given at the NESC Physiology Conference, Sydney Australia, 2nd November.
- Harding JW. (2006) *Enhancing Elite Level Snowboard Performance - From The Lab To The Field To The Future*. Paper given at the AIS Sports Technology Conference, Canberra Australia, 31st August.

RECOMMENDATIONS

- *“Jason is known by the AIS Applied Research Centre as an innovative, entrepreneurial and gifted young scientist. His work included the introduction, use and adaptation of technology in the sport of snowboarding. For this work, Jason utilised not only his scientific skills, but also his ability to communicate and negotiate with a range of diverse stakeholders. I have no hesitation in recommending Jason.”* **Tim Kelly, Business Manager, Australian Institute of Sport, January 12, 2009**
- *“Jason is an energetic and insightful colleague. His PhD work in Winter Sports is outstanding. He is an innovator and trusted colleague.”* **Keith Lyons, Head of Department of Biomechanics and Performance Analysis, Australian Institute of Sport, March 30, 2009**
- *“I believe Jason to be an inspiration to Winter Sport and sport in general here in Australia and abroad. Jason is someone to look up to and respect in the sport industry and more important in life. He is continually leading, motivating and inspiring the people he works with. He develops excellent relationships with people on a professional and personal level, which makes him a very valuable colleague, and friend. Jason is striving to push his abilities in life and work to be the most outstanding and successful person that anyone could know. He is an inspiration to those he has dealings with and gives them something that they can take away and use in life and their career. A unique quality that is very rare in this world.”* **Ben Wordsworth Head National Snowboard Coach, Olympic Winter Institute of Australia, January 7, 2009**
- *“Jason is a creative individual focused on achieving results for elite level snowboarding and further development of the sport using technology”* **Dr. Daniel James. Scientific Researcher, Centre For Wireless Monitoring and Applications, Griffith University, March 16, 2009**
- *“I have known Jason for approximately 5 years, first as a quality assurance officer at the AIS and then as an Industry based PhD scholar at the AIS working with Winter Sports. Jason has a number of desirable attributes as a sport scientist. He has been very well trained and is highly experienced when it comes to laboratory standards, ensuring accuracy of results and designing and implementing appropriate testing methodology. Jason also has a natural connection and love for sports such as skateboard, snowboard, and surfing; sports not traditionally engaged with sport science support. Jason has proven to be very innovative and highly resourceful when it comes to working with the Australian National Snowboard Program. I am sure that in the right environment, Jason could become a very valuable resource for a national team coach responsible for sports that combine fitness and acrobatic skills. Jason has become unique as a sport scientist because of his ongoing interest in how to incorporate micro and nanotechnology into the sport in a way that has the potential to differentiate training practices from ordinary to exceptional. When Jason finishes his PhD he will emerge as a very unique and highly experienced young professional, ready to support elite sporting programs at the highest level. I am sure, if given the right opportunities Jason will have a very productive and exciting career in sport science and high performance management. I am more than happy to comment on Jason further if you require additional comments on his strengths and weaknesses, personality, ability to work with other professionals or his specific fit within another organisation.”* **Dr. David Martin. Senior Physiologist, Department of Physiology, Australian Institute of Sport, March 13, 2009**

- *“Jason is an innovative, creative and thorough sports scientist, constantly pushing boundaries and ideas in the never-ending search for that often elusive 'edge'. An enthusiastic and knowledgeable professional”* **Matt Lyons, Head National Ski Cross Coach, Olympic Winter Institute of Australia, October 11, 2009**
- *“Jason has a strong background in Winter Sports. I worked with him on the Half Pipe sensor project where he had good ideas and developed good strategies to test those ideas. I would certainly be happy to work with Jason in the future.”* **Colin Mackintosh, Head Applied Sensors, Australian Institute of Sport, March 3, 2009**
- *“Jason is an independent worker and innovative thinker with a huge passion for board sports and high-performance sporting success. He eagerly acquires new skills when relevant to project outcomes or when tasked to do so. He develops good relationships with the coaches that he works with, which is one of the most critical aspects of success in our field.”* **Jeremy Sheppard, Sport Scientist, Australian Institute of Sport, January 6, 2009**
- **Note:** All recommendations can be accessed in the original form through my professional profile on Linked-In, <http://www.linkedin.com/in/jasonharding> however I believe you need to be a Linked-In member to view my complete profile and the aforementioned recommendations.

REFEREES

- Ben Wordsworth

Head National Snowboard Coach
Olympic Winter Institute of Australia
Mobile 0411 559 554
Email ben.wordsworth@owia.org
- Dr. David Martin BSC. MS. PhD. Internship (U.S Olympic Training Centre)

Senior Physiologist
Department of Physiology, Australian Institute of Sport
Phone (02) 6214 1562
Mobile 0408464759
Email david.martin@ausport.gov.au
- Dr. Daniel James. PhD. Mphil. BSc (Hons)

Scientific Researcher
Griffith University, Nathan Campus
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Mobile 0401 683 592
Email d.james@griffith.edu.au

PHD SUMMARY

'PERFORMANCE ASSESSMENT INNOVATION FOR ELITE-LEVEL SNOWBOARDING'

INTRODUCTION:

Snowboarding is a sport that is currently struggling with the juxtaposition of its traditional ideals of freedom, hedonism and rebellion and the athletic ideals of discipline, control, and continual performance enhancement. This thesis lays the foundations for a bridge between two vastly disparate cultures; one associated with sport science and its quest to enhance athletic performance and the other associated with snowboarding, a sport with an underlying anarchistic and antiauthoritarian ideology. Although undertaken with consideration of the sport's traditional



philosophies and emphasis of the practice community on the more stylistic and subjective aspects of snowboarding performance, this body of work is focused purely on objective methods to improve athletic performance and judging reliability. Ultimately a performance based research project targeting success in elite half-pipe snowboarding competition, this thesis examines the use of technology to introduce relevant, objective information into half-pipe

snowboarding through a multitude of projects. The purpose of this thesis was to: 1. Establish the existence of and quantify the relationship between relevant, objective key performance indicators (KPI's) and subjectively judged scores in elite half-pipe snowboarding competition. 2. Customise, trial and validate wearable technology to automatically quantify objective information on these key performance indicators. 3. Integrate this automated performance assessment concept into elite half-pipe snowboarding competition. 4. Assess the community perception and potential sociological impact of this and future integration. From a sport science perspective, those at the elite level of snowboarding are unable to detach themselves from the connotations and underlying motives associated with the term athlete, whether the expression fits the practice community's underlying cultural ideology or not. This thesis introduces a performance assessment concept that although derived from principles currently used in more traditional sporting disciplines, has been tailored specifically for elite snowboarding.

RESULTS (VERY BRIEF):

This thesis has objectively established that average air-time (AAT) and average degree of rotation (ADR) are the two most important key performance indicators in elite-level half-pipe snowboarding competition. This finding is novel, relevant to the sport and if provided in a timely manner, has applications in training and competition performance assessment. Wearable sensor technology suitable for use in routine training and competition environments was therefore customized

providing an automated system capable of quantifying air time and degree of rotation. Subsequent integration of this concept into elite half-pipe snowboarding was accomplished with a concept competition, the 2007 Australian Institute of Sport (AIS) Micro-Tech Pipe Challenge. During this competition it was established that by using nothing more than objective information generated by technology and a prediction equation based on previously established weightings, it is possible to account for 74% of the variance subjective competition scores and 82% of the variance in subjective competition rankings, established by an elite level judge. As far as we can ascertain, this was one of the first half-pipe snowboarding competitions in the world to use automated objective information to award performance. Nevertheless there needs to be a balance between scientific advancement and 'practice community' expectations. For the most part, athletes, coaches and judges are not opposed to utilising the concept of automated objectivity promoted by this thesis, provided it continues to allow athletic freedom of expression and the capacity for athletes to showcase individual style and flair in competition. There is however a very strong perception that further development and integration be conducted in close association with core community members and be controlled from within the sport.

CONCLUSION:

Art, science, technology and innovative thinking will be required to produce the elite athletes of the future and moreover ensure their competition performances are assessed reliably without bias or corruption. For elite half-pipe snowboarding (and for other board-riding sports such as surfing and skateboarding), the current advancements in micro and other technologies possess the capacity to measure relevant performance information without hindrance to an athlete's normal movement or focus. This thesis therefore recommends that an automated feedback system based on wearable Micro-Electrochemical System (MEMS) sensors such as tri-axial accelerometers and tri-axial rate gyroscopes be tailored for half-pipe snowboarding and utilised to assist coaches, athletes and competition judges assess performance by providing electronic 'memory boards' (a record of an athlete's run characteristics). This will enable accurate and reliable data to be compiled on the two most important aspects of half-pipe snowboarding whilst allowing subjective assessments of athletic ability to focus solely and more thoroughly on the stylistic facets of performance. This is the challenge for elite half-pipe snowboarding in the future. While technological advancements are proposed to enhance athletic performance assessment and competition judging protocols, the integration needs to be balanced with the culture of the sport so that the 'practice community' continue to see themselves as snowboarders, with all the freedom and individuality that entails. Until relatively recently scientists, coaches, athletes, and competition judges wishing to integrate some form of objectivity into half-pipe snowboarding training or competition would be restricted to the use of video based analysis. This thesis reveals it is no longer a question of whether the innovation is there to provide accurate and reliable objective information in an automatic manner, but rather if and how coaches, athletes and competition judges plan to integrate and utilise the information provided.

'AIS MICRO-TECH PIPE CHALLENGE SUMMARY'

INTRODUCTION:

The AIS Micro-Tech Pipe Challenge was an elite-level Australian invitational half-pipe snowboarding competition conducted by AIS researcher Jason Harding that utilised both traditional subjective judging measures and innovative micro-technology to assess half-pipe snowboarding performance. The event, conducted on July 30th 2007 in collaboration with the Australian snowboarding community, is believed to be the first half-pipe snowboarding competition in the world to utilise technologically-based objective feedback to award athletic performance. Over \$9000 of research funding and sponsor contributions (\$5000 in cash prizes) were utilised to



conduct the event and that does not take into account the cost for the right to host the event on Perisher Blue's super-pipe site. Perisher Blue were amazing in their support and without them allowing our competition exclusive access to their half-pipe (free of charge), the event would have had no chance of getting off the ground. The AIS Micro-Tech Pipe Challenge 2007 was primarily a concept event conducted as research into sport specific micro-technology and its capacity to assist athletic performance and subjective judging protocols. The event also focused upon supporting Australian half-pipe snowboarding at a grass roots level with a well organised and well judged elite-level competition focused on Australian half-pipe snowboarders.

COMPETITION FORMAT AND JUDGING PROTOCOLS:

Ten of Australia's elite-level half-pipe snowboarders were instrumented with micro-technology (AIS / Catapult Mini-Max) for the duration of the event. A World Cup and Olympic half-pipe snowboard judge was appointed as the sole subjective judge for this competition. Athletes competed for traditional

subjectively judged accolades (1st, 2nd, 3rd and athlete judged best rider) and additionally competed for three awards based upon the objective calculation of key performance indicators (KPI's) specific to the sport such as highest individual air-time, highest average air-time and highest average degree of rotation. Athletes were allowed three runs to contest the traditional subjective judging component of the competition and the objective judging components of highest average air-time and highest average degree of rotation. The objectively judged highest individual air-time was decided with an additional two run format that immediately followed the main competition. This additional component of the competition allowed each athlete only one hit per-run with the specific instruction to complete straight airs as big and with as much amplitude and air-time as possible.

RESULTS:

Australian snowboarder and 2006 Winter Olympian Mitch Allan was a standout all day to place 1st in the subjective judging category, 1st in the athlete judged best rider category and 1st in the highest average degree of rotation category (648 degrees). Ben Mates, also a 2006 Winter Olympian and a former member of the Australian national half-pipe snowboard team focussed on laying down solid runs throughout the entire competition and was rewarded with a 2nd placing in the subjective judging category. Clint Allan, one of Australia's premier all round professional snowboarders took out 3rd place in the subjective judging category and tied with Andrew Burton (also a 2006 Winter Olympian and former member of the Australian national half-pipe snowboard team), in the highest average air-time category (1.41 seconds). Nate Johnstone, a young Australian snowboarder tipped by many to have the innate riding talent and commitment to cause major carnage on the international competition circuit seemed to be pumped all day and although just missing out on the cash up for grabs for the top three finishers in the subjective judging category (he placed 4th), he went on to boost the biggest single air of the day (1.92 seconds) and take out 1st place in the highest individual air-time category.

THE FUTURE OF THE EVENT:

The AIS Micro-tech Pipe Challenge was conducted in order to showcase the possibilities afforded by micro-technology when focussed upon a particular sport. In addition, this event was conducted to initiate a gradual integration of this idea into elite-level half-pipe snowboarding and to hopefully instigate an annual half-pipe competition hosted by Australia that is at the forefront of innovative athlete feedback and judging protocols. The plan for the future is incorporate community feedback related to the overall concept to improve on the 2007 event. A focus intrinsic to these practice community perceptions will be the creation and subsequent examination of an innovative judging protocol focussed in the direction riders, coaches and judges would like to see competitive half-pipe snowboarding progress. Conducting a similar event in the future combining both subjective and objective judging to provide a single score pertaining to athletic performance (an extension on the judging in 2007) will be the next step in integrating this concept into half-pipe snowboarding. The event placed Australian snowboarding at the forefront of innovative athletic feedback and judging protocols for their discipline, and was well received by the riders, coaches, judges and the snowboard community in general.

Results, Images, Background Research, and Extra Information related to the AIS Micro-Tech Pipe Challenge can be found on www.AnarchistAthlete.com

Click [HERE](#) to be redirected to the page that specifically details the AIS Micro-Tech Pipe Challenge.

MEDIA SUMMARY

- New Scientist – 15 May 2009 – ‘Innovation: Give referee technology a sporting chance’
- Science Daily – 2nd June 2009 – ‘New Era Of Sports: 'Instrumenting' Athletes And Equipment’
- Sports Impulse – 6th February 2009 – ‘Instrumenting’ Athletes and Equipment’
- Blackwell Publishing Room – 28th May 2009 – ‘New Era Of Sports: 'Instrumenting' Athletes And Equipment’
- Australian Institute of Sport – 16th December 2008 – ‘High-tech leap for snowboarding’
- Gold Coast Bulletin – 9th August 2008 – ‘Sporting Glory – Griffith students find innovative ways to be part of the action – Enter the Sporting Arena’
- Smart Start Magazine 15th October 2008 – ‘Make your own wave – Sealed Section’
- The Courier Mail – 7th September 2007 – ‘Electronic memory board to give athletes the edge’
- Electronics News - 3rd August 2007 – ‘First hi-tech snowboard competition’
- Australian Broadcasting Corporation, ABC South East NSW - 2nd August 2007 – ‘Giving our athletes the winning edge’
- Canberra Times – 1st August 2007 – ‘Technology helps carve a competitive edge’
- The Sydney Morning Herald – 31st July 2007 – ‘A measured approach to the air up there’
- Ski.Com.au – 27th July 2007 – ‘AIS to test Micro-Technology in this Monday's half-pipe snowboarding event at Perisher Blue’
- Griffith Gazette – Issue 4 – 2007 – ‘Engineering a winning edge’
- Digital Snowboard Magazine, Issue 1 – 15th August 2006 – ‘Lifestyles – AIS’
- Griffith Micro-News Volume 17 (2) – September 2005 – ‘Sports mad about engineering’