The Engineering of Sport 6
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Volume 2: Developments for Disciplines
Preface

What you are holding in your hands is probably the best overview of activities in sports engineering available at the time of printing; i.e. the state of the art in summer 2006. It is the result of so many people’s work to whom we are indebted that it is difficult to name them: there are the authors, the scientific advisory board, the scientific committee, the theme patrons, the publisher and printer, the advisors of whatever kind – and, here we have to make an exception, there is Ingo and Amanda. Nobody who has been part of the production of this book could have done without them, at the very least us: they handled issues you wouldn’t even believe could turn up with efficiency and charm. Thanks, Ingo Valtingoier; thanks, Amanda Staley.

In the accumulation of the contributions and the preparation of the proceedings we encountered one development that we were very happy about: the sports engineering community keeps growing – in the number or researchers and experts involved, but also in the breadth of disciplines and institutions contributing. This should definitely be interpreted as a positive development – even though in the evaluation of contributions this lead to a number of intricate discussions. Is sports engineering primarily science? Is it engineering? Is it science and engineering helping sports? Some reviewers had differing views on that: if it is science, you need method, data, and discussion; if it is engineering, you need method and an outcome with some demonstrable usefulness, if it is an aide to sports then whatever has been done needs demonstrable relevance. As a consequence, some contributions very well done from an engineering perspective have been turned down by hardcore scientists, and vice versa; in some cases we tried to intermediate, in others it may have been bad luck for the contributors. We think sports engineering will have to live with this variety of perspectives and interests; it is rather the appeal of this field in the process of finding itself. Openness combined with consistent reasoning will be needed to progress from here; somewhere in-between academic traditions and Feyrhabend’s famous “Anything goes”.

As a quick glimpse behind the scene, besides the disciplinary quarrels sketched above some “cultural” clashes could also not be avoided. One German reviewer put his comments in a very direct way that was hard to bear for the British author; some East Asian authors had a hard time in focusing their writing on the most interesting results and were thus bluntly thrown out; some well-known members in one community have seen their abstract turned down by experts from another area who did not know about the writer’s fame… these anecdotes point to just a couple of more issues the sports engineering community will have get to grips with in the not too distant future.
As the result of various influences in these proceedings you will find a number of new topic areas indirectly related to but important to sports engineering. One area of concern we like to especially highlight here is the topic of sustainability, which may serve as an important yardstick for the future development of sports engineering and hopefully other industrial activities. Furthermore, you will find contributions on trends, cultural influences, human factors and on neural network modeling. Finally, according to the special emphasis of this conference we were successful in seeking a large number of papers in the area of innovation and design, including economic perspectives and proposals for novel design approaches. To our regret, even though we had tried hard we could get no contributions on industrial design – this area with so much relevance to sports equipment apparently is still a step-child in our community.

In the assembly of these proceedings we have endeavored to realize some novel approaches. First of all, we used “theme patrons” for different topic areas who not only helped acquire contributions but were also asked to write a synopsis of the contributions in “their” fields. This will hopefully increase the use value for readers, who by just reading the synopses can have a basic idea about developments in certain fields, and can then scan contributions on a much better knowledge basis. This is a first step towards converting the proceedings into a sort of handbook which hopefully will be taken up by future editors.

Then, as we tried to increase the relevance of sports engineering to sports, we have asked authors to take special care to illustrate the respective relevance, and to put their contribution into a sports-related category rather than a discipline-oriented category. Therefore, one volume of these proceedings has been named “developments for sports”; it is the biggest and could have even been bigger. The second volume is termed “developments in disciplines”, which consists mainly of contributions focusing on modeling and measurements. A third volume has been named “developments for innovation”, a tribute to this special focus of this conference (being organized by a center for innovation in sports), and to the fact that we could accumulate an amazing number of contributions in this field.

Finally, we hope that the reader will appreciate the outcome, and we’ll be very happy to receive comments of whatever kind, be it criticism, proposals for improvement or grappa casks and flower arrangements.

Eckehard Fozzy Moritz
Stephen Haake
Editors
July 2006
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Contributors

Simon C. Adelmann
University of Birmingham, UK

Michiyoshi Ae
University of Tsukuba, Japan

Uzoma Ajoku
Loughborough University, UK

Shinichiro Akiyama
Toyota Motor Corporation, Japan

Firoz Alam
Royal Melbourne Institute of Technology, Australia

Pär-Anders Albinsson
Swedish Defence Research Agency, Sweden

Enrique Alcântara
Universitat Politècnica de València, Spain

Brady C. Anderson
University of Calgary, Canada

Lauren Anderson
Loughborough University, UK
Contributors

Ross Anderson
University of Limerick, UK

Dennis Andersson
Swedish Defence Research Agency, Sweden

Yiannis Andreopoulos
The City College of New York, USA

Ali Ansarifar
Loughborough University, UK

Ayako Aoyama
Tokyo Institute of Technology, Japan

Takeshi Asai
Yamagata University, Japan

Andrew Ashcroft
University of Cambridge, UK

Alan Ashley
United States Ski Association, USA

Mirco Auer
Swiss Federal Institute for Snow and Avalanche Research Davos, Switzerland

Andreas Avgerinos
Democritus University of Thrace, Greece

Arnold Baca
University of Vienna, Austria

Sarah Barber
University of Sheffield, UK

Franck Barbier
Université de Valenciennes, France

Matthew R. Barker
Auckland University of Technology, New Zealand

Joseph Beck
United States Air Force Academy, USA
Nicolas Belluye  
Decathlon, France

Alexey, Belyaev  
Perm State Technical University, Russia

Göran Berglund  
Sandvik Material Technology, Sweden

Nils Betzler  
Otto von Guericke University Magdeburg, Germany

Marc Bissuel  
INSA Lyon, France

Kim Blackburn  
Cranfield University, UK

Jane R. Blackford  
University of Edinburgh, UK

Kim B. Blair  
Massachusetts Institute of Technology, USA

Stephan Boerboom  
Technische Universität München, Germany

Harald Böhm  
Technische Universität München, Germany

Róbert Bordás  
Otto von Guericke University Magdeburg, Germany

Pierre-Etienne Bourban  
Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Jean-Daniel Brahant  
INSA Lyon, France

Alan N. Bramley  
University of Bath, UK

Ken Bray  
University of Bath
Desmond Brown
University of Ulster, UK

Steve Brown
University of Wales Swansea, UK

Mark-Paul Buckingham
University of Edinburgh, UK

Jeremy Burn
Bristol University, UK

Mike P. Caine
Loughborough University, UK

Matt J. Carré
University of Sheffield, UK

David J. Carswell
University of Wales Swansea, UK

Catherine J. Caton
University of Birmingham, UK

Chaochao Chen
Kochi University of Technology, Japan

Lance Chong
University of Illinois, USA

Simon Choppin
University of Sheffield, UK

Jeffrey J. Chu
Simbex, USA

Steffen Clement
AUDI Sport, Germany

Etienne Combaz
Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Mario Comín
Universitat Politècnica de València, Spain
Alex Cork  
Loughborough University, UK

James Cornish  
University of Birmingham, UK

Robert Cotcey  
HEAD Sport AG, Austria

Aimee C. Cubitt  
University of Bath, UK

Kieran F. Culligan  
Massachusetts Institute of Technology, USA

David Curtis  
Sheffield Hallam University, UK

Dave Custer  
Massachusetts Institute of Technology, USA

Tim Deans  
Bristol University, UK

Jeroen Dethmers  
Universiteit Maastricht, Netherlands

Neil Dixon  
Loughborough University, UK

Sharon J. Dixon  
University of Exeter, UK

Jamie Douglas  
International Tennis Federation, UK

Patrick J. Drane  
University of Massachusetts Lowell, USA

Melanie Dumm  
Technische Universität München, Germany

Juan Vicente Durá  
Universitat Politècnica de València, Spain
Colin Eames  
United States Air Force Academy, USA

Markus Eckelt  
University of Applied Sciences Technikum Wien, Austria

Jürgen Edelmann-Nusser  
Otto von Guericke University Magdeburg, Germany

Frank Einwag  
Klinik für Orthopädische Chirurgie und Unfallchirurgie Bamberg, Germany

Carl F. Ettlinger  
Vermont Safety Research, USA

Paul Ewart  
University of Waikato, New Zealand

Emanuela Faggiano  
University of Padova, Italy

Mathieu Fauve  
Swiss Federal Institute for Snow and Avalanche Research Davos, Switzerland

Owen R. Fauvel  
University of Calgary, Canada

Peter Federolf  
University of Salzburg, Austria

Monika Fikus  
University of Bremen, Germany

Christian Fischer  
Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland,

Peter R. Fischer  
University of Augsburg, Germany

Keith Fitzpatrick  
University of Limerick, UK

Paul Fleming  
Loughborough University, UK
Ingmar Fliege
Technical University Kaiserslautern

Matthieu Foissac
Decathlon, France

Kathryn Franklin
University of Glamorgan, UK

Philippe Freychat
Decathlon, France

Piergiuseppe Fumei
University of Padova, Italy

Franz Konstantin Fuss
Nanyang Technological University, Singapore

Javier Gámez
Universitat Politècnica de València, Spain

Nico Ganter
Otto von Guericke University Magdeburg, Germany

Paul Gebhard
Technische Universität München, Germany

Alexander Geraldy
Technical University Kaiserslautern

Anton Gerrits
TNO, Netherlands

Alexandros Giannakis
CSEM - Swiss Center for Electronics and Microtechnology, Switzerland

Maria Giannousi
Democritus University of Thrace, Greece

Paul J. Gibbs
Loughborough University, UK

Christophe Gillet
Université de Valenciennes, France
 Contributors

Juan Carlos Gonzáles  
Universitat Politécnica de València, Spain

Simon Goodwill  
University of Sheffield, UK

Philippe Gorce  
Toulon University, France

Rae, Gordon  
University of Glamorgan, UK

Reinhard Gotzhein  
Technical University Kaiserslautern

Richard M. Greenwald  
Simbex, USA

Thomas Grund  
Technische Universität München, Germany

Guglielmo Guerrini  
Italian Kayak Federation, Italy

José María Gutierrez  
Universitat Politécnica de València, Spain

Stephen J. Haake  
Sheffield Hallam University, UK

Christian Hainzlmaier  
Technische Universität München, Germany

Nick Hamilton  
Sheffield Hallam University, UK

Dong Chul Han  
Seoul National University, Korea

R. Keith Hanna  
Fluent Europe Ltd., UK

Andy R. Harland  
Loughborough University, UK
John Hart
Sheffield Hallam University, UK

Thomas Härte1
Chemnitz University of Technology, Germany

Ulrich Hartmann
Technische Universität München, Germany

Andreas Hasenknopf
MLD, Germany

Dieter Heinrich
University Innsbruck, Austria

Ben Heller
Sheffield Hallam University, UK

Mario Heller
University of Vienna, Austria

Christian Henneke
SportKreativWerkstatt GmbH, Germany

Martin Herbert
Bristol University, UK

Falk Hildebrand
Institute for Applied Training Science (IAT) Leipzig, Germany

Norbert Himmel
Institut für Verbundwerkstoffe GmbH, Germany

Frédérique Hintzy
Laboratoire de Modélisation des Activités Sportives, France

Nobuyuki Hirai
University of Tsukuba, Japan

Yuusuke Hiramatsu
Meijo University, Japan

Philip Hodgkins
Loughborough University, UK
Contributors

Martin Hofmann
Otto von Guericke University Magdeburg, Germany

Frank Hoisl
Technische Universität München, Germany

Christopher E. Holmes
Loughborough University, UK

Yoshihisa Honda
Kinki University, Japan

Joe Hopkins
Western Michigan University, USA

Neil Hopkinson
Loughborough University, UK

Nicolas Horvais
Laboratoire de Modélisation des Activités Sportives, France

Yohei Hoshino
Hokkaido University, Japan

Kenji Hosokawa
Chubu University, Japan

Mont Hubbard
University of California, Davis, USA

Andrew Hytjan
University of Colorado at Boulder, USA

Yesim Igci
Princeton University, USA

Hiroshi Iida
Polytechnic University Kagawa, Japan

Yoshio Inoue
Kochi University of Technology, Japan

Carl Johan Irander
Sandvik Material Technology, Sweden
Contributors

Jon Iriberri Berrostegieta
Performance Enhancement Centre, Basque Government, Spain

Gareth Irwin
University of Wales Cardiff, UK

Aaron Ison
Cascade Engineering, USA

Andrea Isotti
University of Padova, Italy

Koji Ito
Japan Institute of Sport Sciences, Japan

Takuzo Iwatsubo
Kansai University, Japan

Thomas Jaitner
Technical University Kaiserslautern

Daniel A. James
Griffith University, Australia

David M. James
University of Sheffield, UK

Iain James
Cranfield University, UK

Mike J. Jenkins
University of Birmingham, UK

Marke Jennings-Temple
Cranfield University, UK

Alexander W. Jessiman
Simbex, USA

Tomohiko Jin
Toyota Motor Corporation, Japan

Robert J. Johnson
University of Vermont, USA
Contributors

Clifton R. Johnston
University of Calgary, Canada

Roy Jones
Loughborough University, UK

André Jordan
Otto von Guericke University Magdeburg, Germany

Laura Justham
Loughborough University, UK

Hank Kaczmarski
University of Illinois, USA

Hiroyuki Kagawa
Kanazawa University, Japan

Michael Kaiser
Institut für Verbundwerkstoffe GmbH, Germany

Nico Kamperman
TNO, Netherlands

Peter Kaps
University Innsbruck, Austria

Shozo Kawamura
Toyohashi University of Technology, Japan

Ian C. Kenny
University of Ulster, UK

David G. Kerwin
University of Wales Cardiff, UK

Andreas Kiefmann
Technische Universität München, Germany

Cheol Kim
Kyungpook National University, Korea

Moo Sun Kim
Seoul National University, Korea
Sun Jin Kim  
Seoul National University, Korea

Wendy Kimmel  
University of California, Davis, USA

Eftimis Kioumourtzoglou  
Democritus University of Thrace, Greece

Bob Kirk  
University of Sheffield, UK

Sebastian Klee

Isabella Klöpfer  
Technische Universität München, Germany

Karin Knoll  
Institute for Applied Training Science (IAT) Leipzig, Germany

Klaus Knoll  
Institute for Applied Training Science (IAT) Leipzig, Germany

Ted Knox  
Wright Patterson Air Force Base, USA

Cheolwoong Ko  
University of Iowa, USA

Osamu Kobayashi  
Tokai University, Japan

Yukinori Kobayashi  
Hokkaido University, Japan

Jan Koch  
Technical University Kaiserslautern

Hannes Kogler  
Fischer GmbH, Austria

Sekiya Koike  
University of Tsukuba, Japan
Philipp Kornfeind
University of Vienna, Austria

Giorgos Kotrotsios
CSEM - Swiss Center for Electronics and Microtechnology, Switzerland

Johan Kotze
HEAD Sport AG, Austria

Christian Krämer
Technische Universität München, Germany

Maximilian Krinninger
Technische Universität München, Germany

Michael Krohn
Hochschule für Gestaltung und Kunst Zürich, Switzerland

Andreas Krüger
Otto von Guericke University Magdeburg, Germany

Thomas Kuhn
Technical University Kaiserslautern

Herfried Lammer
HEAD Sport AG, Austria

Nicholas Lavery
University of Wales Swansea, UK

Paul Leaney
Loughborough University, UK

Manryung Lee
Kyungin Women’s College, Korea

Woo Il Lee
Seoul National University, Korea

Peter Leeds-Harrison
Cranfield University, UK

Sébastien Leteneur
Université de Valenciennes, France
Chris Lewis-Jones
Delcam plc, UK

Udo Lindemann
Technische Universität München, Germany

Daniel Low
University of Exeter, UK

Peter Lugner
Vienna University of Technology, Austria

Richard Lukes
University of Sheffield, UK

Anton Lüthi
Swiss Federal Institute for Snow and Avalanche Research Davos, Switzerland

Reiner Lützeler
RWTH Aachen University, Germany

Jani Macari Pallis
Cislunar Aerospace Inc., USA

Lionel Manin
INSA Lyon, France

Graeme Manson
University of Sheffield, UK

Jan-Anders E. Månson
Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Giuseppe Marcolin
University of Padova, Italy

Brett A. Marmo
University of Edinburgh, UK

Antonio Martinez
Universitat Politècnica de València, Spain

Natividad Martínez
Universitat Politècnica de València, Spain
Tom Mase
Michigan State University, USA

Steve Mather
University of Nottingham, UK

Sean Maw
University of Calgary, Canada

Alex J. McCloy
University of Ulster, UK

Mark Mc Hutchon
University of Sheffield, UK

Andrew McLeod
Cranfield University, UK

Hossain Md.Zahid
Toyohashi University of Technology, Japan

Kenneth Meijer
Universiteit Maastricht, Netherlands

Daniel Memmert
University of Heidelberg, Germany

Roberto Meneghello
University of Padova, Italy

Imke K. Meyer
University of Bremen, Germany

Michael Michailov
National Sports Academy, Bulgaria

Véronique Michaud
Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Thomas Milani
Chemnitz University of Technology, Germany

Paul Miller
University of Colorado at Boulder, USA
Stuart Miller
International Tennis Federation, UK

Guillaume Millet
Université Jean Monnet Saint-Etienne, France

Hirofumi Minamoto
Toyohashi University of Technology, Japan

Sean R. Mitchell
Loughborough University, UK

Chikara Miyaji
Japan Institute of Sport Sciences, Japan

Yusuke Miyazaki
Tokyo Institute of Technology, Japan

Taketo Mizota
Fukuoka Institute of Technology, Japan

Stuart Monk
University of Birmingham, UK

Ana Montaner
Universitat Politècnica de València, Spain

John Morgan
Bristol University, UK

Eckehard Fozzy Moritz
SportKreativWerkstatt GmbH, Germany

Rhys Morris
University of Wales Cardiff, UK

Martin Mössner
University Innsbruck, Austria

Maximilian Müller
Technische Universität München, Germany

Masahide Murakami
University of Tsukuba, Japan
Werner Nachbauer  
University Innsbruck, Austria

Daiki Nakajima  
Kansai University, Japan

Motomu Nakashima  
Tokyo Institute of Technology, Japan

Takeshi Naruo  
Mizuno Corporation, Japan

Alan M. Nathan  
University of Illinois, USA

Dirk Niebhur  
Technical University Kaiserslautern

Günther Niegl  
University of Vienna, Austria

Christian Nolte  
University of Augsburg, Germany

Claudius Nowoisky  
Otto von Guericke University Magdeburg, Germany

Wubbo Ockels  
Delft University of Technology, Netherlands

Stephan Odenwald  
Chemnitz University of Technology

Yuji Ohgi  
Keio University, Japan

Shigemichi Ohshima  
Meijo University, Japan

Atsumi Ohtsuki  
Meijo University, Japan

Hiroki Okubo  
National Defense Academy, Japan
Steve R. Otto
R&A Rules Limited, UK

Riccardo M. Pagliarella
Royal Melbourne Institute of Technology, Australia

Jürgen Perl
University of Mainz, Germany

Stéphane Perrey
Université de Montpellier, France

Christiane Peters
Technische Universität München, Germany

Nicola Petrone
University of Padova, Italy

Neil Pettican
Cranfield University, UK

Jon Petzing
Loughborough University, UK

Andrew Phillips
University of Bath, UK

John Plaga
Wright Patterson Air Force Base, USA

Christopher J.G. Plummer
École Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Alexander Romanovich Podgaetsk
Delft University of Technology, Netherlands

Jaime Prat
Universitat Politècnica de València, Spain

Céline Puvaubreau
Decathlon, France

Franck Quaine
Université Joseph Fourier Grenoble, France
Jose Ramiro
Universitat Politècnica de València, Spain

Robin Redfield
United States Air Force Academy, USA

Martin Reichel
University of Applied Sciences Technikum Wien, Austria

Hansueli Rhyner
Swiss Federal Institute for Snow and Avalanche Research Davos, Switzerland

Matthieu Richard
PETZL, France

Claudio Robazza
University of Padova, Italy

Bryan C. Roberts
Loughborough University, UK

Jonathan Roberts
Loughborough University, UK

Markus A. Rohde
University of Siegen, Germany

Jouni A. Ronkainen
Loughborough University, UK

David Rosa
Universitat Politècnica de València, Spain

Steve Rothberg
Loughborough University, UK

Maxime Roux
Decathlon, France

Daniel Russell
Kettering University, USA

Anton Saho
University of Applied Sciences Technikum Wien
Takahiro Sajima
SRI Sports Limited, Japan

Reiko Sakashita
Kumamoto University, Japan

Toshiyuki Sakata
Chubu University, Japan

Pierre Samozino
Laboratoire de Modélisation des Activités Sportives, France

Yu Sato
Chubu University, Japan

Nicholas Savage
Royal Melbourne Institute of Technology, Australia

Hans Savelberg
Universiteit Maastricht, Netherlands

Michael Schiestl
University Innsbruck, Austria

David Schill
United States Air Force Academy, USA

Kurt Schindelwig
University Innsbruck, Austria

Erin Schmidt
Loughborough University, UK

Heinz-Bodo Schmiedmayer
Vienna University of Technology, Austria

Alexander Schneider
Turn Till Burn GmbH, Switzerland

Isabelle Schöffl
University of Erlangen-Nuremberg, Germany

Volker R. Schöffl
Klinik für Orthopädische Chirurgie und Unfallchirurgie Bamberg, Germany
Stefan Schönberger  
Technische Universität München, Germany  

Herwig Schretter  
HTM Tyrolia, Austria  

Andreas Schweizer  
Kantonsspital Aarau, Switzerland  

Carsten Schwiewagner  
Technische Universität München, Germany  

Nathan Scott  
The University of Western Australia, Australia  

Brian P. Self  
United States Air Force Academy, USA  

Terry Senior  
Sheffield Hallam University, UK  

Veit Senner  
Technische Universität München, Germany  

Kazuya Seo  
Yamagata University, Japan  

Sonali Shah  
University of Illinois at Urbana-Champaign, USA  

Rebecca H. Shaw  
University of Massachusetts Lowell, USA  

Jasper Shealy  
Rochester Institute of Technology, USA  

Alison L. Sheets  
University of California, Davis, USA  

James A. Sherwood  
University of Massachusetts Lowell  

Kyoko Shibata  
Kochi University of Technology, Japan
Jun Shimizu  
Japan Institute of Sport Sciences, Japan

Peter Shipton  
Cranfield University, UK

Hitoshi Shiraki  
University of Tsukuba, Japan

Anton Shumihin  
Perm State Technical University, Russia

Gerard Sierksma  
University of Groningen, Netherlands

Lloyd Smith  
Washington State University, USA

Peter Spitzenpfieil  
Technische Universität München, Germany

Carolyn Steele  
Loughborough University, UK

Darren J. Stefanyshyn  
University of Calgary, Canada

Gunnar Stevens  
University of Siegen, Germany

Victoria H. Stiles  
University of Exeter, UK

Valeriy Stolbov  
Perm State Technical University, Russia

Martin Strangwood  
University of Birmingham, UK

Wolf Strecker  
Klinik für Orthopädische Chirurgie und Unfallchirurgie Bamberg, Germany

Martin Strehler  
SportKreativWerkstatt GmbH, Germany
Claude Stricker  
AISTS – International Academy of Sports Science and Technology, Switzerland

William J. Stronge  
University of Cambridge, UK

Aleksandar Subic  
Royal Melbourne Institute of Technology, Australia

Maria José Such  
Universitat Politècnica de València, Spain

Cory Sutela  
SRAM Corporation, USA

Soichiro Suzuki  
Kitami Institute of Technology, Japan

Masaya Takahashi  
Sumitomo Light Metal, Japan

Hironuri Takihara  
Toyohashi University of Technology, Japan

Ming Adin Tan  
Nanyang Technological University, Singapore

Angelo Tempia  
Royal Melbourne Institute of Technology, Australia

Eva Tenan  
University of Padova, Italy

Dominique Thévenin  
Otto von Guericke University Magdeburg, Germany

Mark Timms  
Hot Stix Technologies, USA

Daniel Toon  
Loughborough University, UK

Marcus Trapp  
Technical University Kaiserslautern
Masaya Tsunoda
SRI Sports Limited, Japan

Sadayuki Ujihashi
Tokyo Institute of Technology, Japan

Sándor Vajna
Otto von Guericke University Magdeburg, Germany

Rafael Valero
AIJU, Technological Institute of Toys, Spain

Sergey Vasilenko
JSC Aviadvigatel - Perm Engine Company, Russia

Pedro Vera
Universitat Politècnica de València, Spain

Johan Verbeek
University of Waikato, New Zealand

Nicholas Vernadakis
Democritus University of Thrace, Greece

Alex Vickers
Cranfield University, UK

Laurent Vigouroux
Université Joseph Fourier Grenoble, France

Jeff Vogwell
University of Bath, UK

Jörg F. Wagner
University Stuttgart, Germany

Klaus Wagner
Institute for Applied Training Science (IAT) Leipzig, Germany

David Walfisch
Massachusetts Institute of Technology, USA

Eric S. Wallace
University of Ulster, UK
Tom Waller
Loughborough University, UK

Andy Walshe
United States Ski Association, USA

Simon Watkins
Royal Melbourne Institute of Technology, Australia

Pek Chee We
Royal Melbourne Institute of Technology, Australia

Christian Wehel
Technical University Kaiserslautern

Matthew Weber
University of Colorado at Boulder, USA

Sheldon Weinbaum
The City College of New York, USA

Andrew West
Loughborough University, UK

Cory West
Hot Stix Technologies, USA

Miles Wheeler
University of Colorado at Boulder, USA

Josef Wiemeyer
Technische Universität Darmstadt Germany

Bart Wijers
Terra Sports Technology, Netherlands

Paul Willems
Universiteit Maastricht, Netherlands

Simon Williams
University of Glamorgan, UK

Markus A. Wimmer
Rush University Medical Center Chicago, USA
Erich Wintermantel  
Technische Universität München, Germany

Clive Wishart  
Bristol University, UK

Kerstin Witte  
Otto von Guericke University Magdeburg, Germany

Gavin Wood  
Cranfield University, UK

Ian C. Wright  
TaylorMade-adidas Golf Company, USA

Qianhong Wu  
Villanova University, USA

Volker Wulf  
University of Siegen, Germany

Bernd Wunderlich  
Otto von Guericke University Magdeburg, Germany

Masanori Yabu  
SRI Sports Limited, Japan

Tetsuo Yamaguchi  
SRI Sports Limited, Japan

Connie Yang  
Loughborough University, UK

Keiko Yoneyama  
Tokyo Institute of Technology, Japan

Takeshi Yoneyama  
Kanazawa University, Japan

Colin Young  
Loughborough University, UK

Allen Yuen  
University of Calgary, Canada
Jack Zable
University of Colorado at Boulder, USA

Michael F. Zäh
Technische Universität München, Germany

Eleni Zetou
Democritus University of Thrace, Greece

Andreas Zimmermann
University of Siegen, Germany

Werner Zirngiebl
Praxisklinik für Orthopädie und Sportmedizin, München, Germany