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 Feyerabend’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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