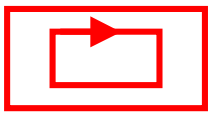
First African Control Conference

3-5 December 2003
University of Cape Town
Cape Town, South Africa

Organised and sponsored by the
South African Council for Automation and Computation (SACAC)



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Introduction

On behalf of the South African Council for Automation and Computation (SACAC), and the International Programme Committee, I have pleasure in welcoming participants to the First African Control Conference.

SACAC is an organisation serving the interests of automation and computation at a high level in South Africa. Its membership is corporate rather than individual and it provides links between suppliers, end-users and researchers in automation and computation. Increasingly the "computation" interest of SACAC has focused on control application because of the rapid development of the information technology sector and availability of cheap standardised hardware. SACAC serves its members by means of workshops and other activities, and keeps in regular contact with its members electronically and by mail. SACAC is the South African national member organisation of the International Federation of Automatic Control (IFAC) and this provides a distinctive international role for SACAC.

Given the tiny contribution that Africa has made to the development of automatic control, it was rather bold to undertake setting up a continental conference series but we have had an excellent response from colleagues in Africa and from the international community. Having started in Cape Town, we are confident that the conference will get to Cairo in due course! Africa is a continent full of opportunities and challenges, and the control community will be able to contribute to the development of the continent in many ways. We hope that the African Control Conference series will be a forum where these contributions can be shared in interesting and exciting settings.

One of the problems that the automatic control community has had over the past few decades is a growing divide between theory and practice. Africa is less able to afford a disconnection between the academic and industrial community than the First World and we hope that by encouraging papers and participation from industry, the conference will also be a meeting place for theoreticians and practitioners to find common ground.

The conference is enriched by the contributions of the five plenary and semi-plenary speakers and we are grateful to them for agreeing to share their experience and wisdom with us. The plenary speakers are:

Prof. Sigurd Skogestad, Norwegian University of Science and Technology
Prof. David Limebeer, Imperial College
Prof. Roger Benson, ABB
Prof. Guanrong Chen, City University of Hong Kong
Prof. Pedro Albertos, Polytechnic University of Valencia

There were well over a hundred submissions and through a multi-pass review strategy, we have a conference with eighty regular papers, including a satisfying number of industrial and application papers.

The Sixth International Symposium on Quantitative Feedback Theory and Robust Frequency Domain Methods will be held in conjunction with the African Control Conference. Although the QFT sessions are scheduled as regular sessions, the proceedings have been bound in a separate volume.

Venue

The conference will be held at the University's Breakwater Campus, which houses the Graduate School of Business (GSB). The Breakwater Campus includes the historic Breakwater Prison which has been renovated and is now used for less austere purpose of incarcerating students reading business degrees. This is situated within walking distance of Cape Town's V&A Waterfront district, which is one of the most popular tourist destinations in Africa. There are many hotels and a range of restaurants in the immediate vicinity. Further information can be found at:

www.uct.ac.za (for information about the University)
www.cape-town.org (for information about Cape Town, including tourism)

Registration

Registration will take place in the GSB foyer from 16h00 on Tuesday 2nd December, and from 08h00 on Wednesday 3rd December. The registration and help desk will be manned throughout the conference.

Social Programme and Related Technical Activities

3rd December:	Cocktail function in Cape Town's just-completed International Convention Centre, which we anticipate to be the venue for future SACAC and IFAC functions.
4th December:	Conference banquet at the Bay Hotel, on Cape Town's internationally famous Camp's Bay beach.
5th December:	Technical visit to SAB-Miller's historical first brewery, the Ohlsson's brewery in Newlands. Numbers will be limited.
6th December:	Annual inter-university RoboSoccer competition, hosted by SACAC. MTN Science Centre, Canal Walk, Cape Town. Technical tour of a state-of-the-art wine estate. Numbers will be limited.

Climate

The days should be warm and sunny, with some wind. The evenings may be cool enough to justify a jacket or pullover, and delegates wishing to visit Table Mountain, the Cape of Good Hope, or Robben Island are advised to bring some warmer clothing. All of these locations are within an hour's travel of the venue.

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Programme

Wednesday	**3 December**	**Thursday**	**4 December**	**Friday**	**5 December**
8h40-9h00	Opening (E Boje, P Albertos)				
9h00-10h00	Plenary: Prof. David Limebeer "Motorcycle Steering Oscillations Due to Road Profiling" (E Boje)	8h30-9h30	Plenary: Prof. Sigurd Skogestad "Control structure design: What should we control, measure and manipulate?" (P de Vaal)	8h30-9h50	4x2 parallel sessions Linear Systems (M Braae/ I Craig) Speech processing (J Greene / J Tapson)
10h00-10h15	Coffee	9h30-9h50	Coffee	9h50-10h10	Coffee
10h15-11h55	5x2 parallel sessions Industrial Systems 1 (L Lange / R Roberts) Artificial Neural Networks / Fuzzy Logic (C Aldrich)	9h50-11h50	6x2 parallel sessions Process Control 1 (C Aldrich/R. Tzoneva) Laboratory systems (P de Vaa / G Gibbon)	10h10-11h50	5x2 parallel sessions Instrumentation (J Tapson/M V Shuma-Iwisi) Learning systems (C Aldrich/ S-L Jämsä-Jounela)
12h00-12h40	Plenary: Prof. Roger Benson "From Single Loop to Cohesive Process Control: The Future" (J Engelbrecht)	12h00-12h40	Plenary: Prof. Guanrong Chen "Complex Dynamical Networks: Control and Synchronization" (X Xia)	12h00-12h40	Plenary: Prof. Pedro Albertos "Some Issues in Control Engineering Practice" (I Craig)
12h40-13h30	Lunch	12h40-13h30	Lunch	12h40-13h30	Lunch
13h30-15h10	5x2 parallel sessions Industrial Systems 2 (R van Schalkwyk / F Camisami) Non-linear Systems (X Xia / E Eitelberg)	13h30-15h10	5x2 parallel sessions Modelling and Control 1 (L Lange / F Camisami) QFT & Frequency Domain Methods 1 (M Garcia Sanz/ E Boje)	13h30	Modelling and Control 2 (M Jacobs / E Boje) Brewery Tour (limited numbers) (J Tapson)
15h10-15h30	Coffee	15h10-15h30	Coffee		
15h30-17h10	5x2 parallel sessions Adaptive and Non-linear Control Economics and Economic Evaluation of Control (S-L. Jämsä-Jounela/M Peterson)	15h30-17h10	5x2 parallel sessions Automation (FJE Laubscher/J Enslin) QFT & Frequency Domain Methods 2 (E Eitelberg/C Prichard)		
18h30	Reception Cape Town International Convention Centre		Conference Dinner The Bay Hotel – Camps Bay Guest Speaker: Mr Case Rijsdijk S.A.L.T. 'n Pepper	**Saturday**	**6 December** SACAC Robo-soccer Competition Tour to winery

First African Control Conference

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