



**Proceedings of the First Australian Undergraduate
Students' Computing Conference**

September 24 – 26, 2003

**The University of Melbourne
Victoria, Australia**

Editors

Benjamin I. P. Rubinstein

Nelson Chan

K. K. Kshetrapalapuram

Australian Undergraduate Students' Computing Conference 2003 (AUSCC03)
Proceedings of the First Australian Undergraduate Students' Computing Conference

Published & distributed by:

Australian Undergraduate Students' Computing Conference

Email: enquiries@auscc.org

Web: <http://www.auscc.org>

For CD versions of this work contact:

Paul Gruba, Department of Computer Science & Software Engineering,
University of Melbourne, Victoria 3010, Australia

Citations of works in this volume must contain full bibliographic information as follows:

Ahmad, Z. (2003). Wireless Security in Health Care. In Rubinstein, B. I. P., Chan, N. & Kshetrapalapuram, K. K. (Eds.), *Proceedings of the First Australian Undergraduate Students' Computing Conference*. (pp. 1-7). Australian Undergraduate Students' Computing Conference.

Proceedings CD Artwork Ioanna Ioannou and Anthony Teoh
Interior Design and Layout Benjamin I. P. Rubinstein and K. K. Kshetrapalapuram

ISBN: 0 646 42751 2

© Copyright 2003 AUSCC and the individual authors

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced in any process without written permission from the copyright holders. The individual authors assign to AUSCC and educational non-profit institutions a non-exclusive licence to use their articles for personal use and in courses of instruction provided that the article is reproduced in full. The authors also grant a non-exclusive licence to AUSCC to publish their articles in full on the World Wide Web and in other printed and electronic forms for the AUSCC 2003 proceedings. Any other usage is prohibited without the express permission of the authors.

Conference Organisation

Academic Supervisors

Martin Gibbs	Department of Information Systems, The University of Melbourne
Paul Gruba	Department of Computer Science & Software Engineering, The University of Melbourne

Conference Administration

Nelson Chan	Conference Co-chair
Ioanna Ioannou	Conference Co-chair
Vanessa Smith	Conference Co-chair
Catriona Harris	Conference Secretary
Wan Zulhelmi Wan Ahmad Kamar	Bookings Coordinator
Leslie Gondor*	
Nam Kuy Ung	

Program Committee

Nelson Chan	Committee Co-chair
K. K. Kshetrapalapuram	Committee Co-chair
Paul Gruba	Committee Co-chair
Benjamin I. P. Rubinstein	Committee Co-chair

Advertising Committee

Claire Harb	Committee Co-chair
Ioanna Ioannou	Committee Co-chair
Sianny Halim	
Richard Wilson	
Sui Lynn Yeong	

Event Committee

Erica Alfonso	Committee Chair
Thomas Gan	
Jia Kha	
Duana Stanley	
Anthony Teoh	
Linda Zhang	

Finance Committee

Jun Li	Committee Chair
Nirosha Munasinghe	
Mark Shen	
Ti Kean Tan	

Industry Committee

James Chen	Committee Co-chair
Vanessa Smith	Committee Co-chair
Thomas Gan	
Chris Loo	

* Special thanks go to Leslie and Nam for putting together the initial proposal to the Department, under the guidance of Paul Gruba, and rounding up the initial group of volunteers to make up the organising committee.

Inter-university Committee

Benjamin I. P. Rubinstein Committee Chair
Nicolle Fan
Kent Humphries

Publications Committee

K. K. Kshetrapalapuram Committee Chair
Lauren Baird
Ricky Kurniawan
Maurice Ling

Referees

James Bailey
Steven Bird
Paul Gruba
Aaron Harwood
Ed Kazmierczak
Les Kitchen
Rao Kotagiri
Benjamin I. P. Rubinstein
Tobias Ruighaver
Peter Seddon
Leon Sterling
Peter Stuckey
Egemen Tanin

Sponsors

Principle Partner

Apple Computer Australia

Major Sponsors

Information Technology Professionals Association
Melbourne University Engineering Foundation
Department of Computer Science and Software Engineering, University of Melbourne
Department of Information Systems, University of Melbourne

Supporting Sponsors

Faculty of Engineering, University of Melbourne

Foreword

Significantly, this is the first time there has ever been a national undergraduate research conference in computing in Australia.

Quite simply, the ball started rolling with an off-hand comment that I made at the end of a lecture about 18 months ago: 'What do you mean undergraduates can't do research?' I asked. 'So why don't we set up a conference to prove it?' Leslie Gondor, a student in the class, came up to me later. 'Serious?' he asked.

From there, the ball just kept rolling. Leslie wrote a proposal and got other students interested. Weekly meetings were held. Teams were formed. Jobs were assigned. Deadlines were missed and others were planned. Email flew back and forth. Students came and went. A website was built. Posters and invitations were sent out. Other deadlines were missed; more deadlines were planned. Proposals came in; papers were refereed and rewritten. After all that, we edited, formatted and burned.

So now you have it: the Proceedings of the First Australian Undergraduate Students' Computing Conference. It's a thing of beauty, don't you think?

For us these proceedings also represent, we hope, the start of a few solid academic careers, several lifelong friendships and a well-supported annual event that inspires young academics and provides an open forum for their work.

And if anyone ever asks you, tell 'em: Undergraduates can do research.

Paul Gruba
Department of Computer Science and Software Engineering
The University of Melbourne

Table of Contents

Conference Organisation, Referees & Sponsors	iii
Foreword	v
Table of Contents	vi
 <i>Papers</i>	
Wireless Security in Health Care Zeeshan Ahmad	1
Intelligent Information Agents: Search Engines of the Future? Naomi Augar	7
A Multi-lingual Web-based Survey Form Machine Translation Mechanism Richard Boddington, Judy Clayden, Michael Collins and Sam Pride	13
A Portable, Cross-platform Emulation System John Casey	18
The Threat of the Cybercrime Act 2001 to Australian IT Professionals Nelson Chan, Simon Coronel and Yik Chiat Ong	25
Fast Trajectory Generation Using Bezier Curves Melissa Fixter	34
Architecture of an Open-sourced Extensible Data Warehouse Builder: InterBase 6 Data Warehouse Builder (IB-DWB) Maurice Han Tong Ling and Chi Wai So	40
Word Prediction Tools: Meeting the Needs of Dyslexic High School Students Vanessa Love	46
GMPLS in Optical Networks Noelle Ng and Doan B Hoang	53
Problems of Storing Advanced Data Abstraction in Databases Kelly Nunn-Clark, Lachlan Hunt, Teo Meng Hooi and Balachandran Gnanasekaraier	59
Fast RSVP Handovers in Mobile IPv6 Daniel Plasto	65
Prolog for Topic Map Constraints Erica Santosaputri	70
Public Query Technology: Features, Limitations and an Application Bob Smart	77
Exploring the Nature of Commitment to Software Quality Initiatives: A Political Perspective Danielle Tavares-Rixon	87

Cultural Influences on ERP Implementation Success Xavier Thavaruban Thavapragasam	93
Automated Deduction for Deontic Logics: Laying the Foundations of Legal Expert Systems Simon Thornton.....	100
Implementing Dynamic Semantic Resolution Simon Thornton.....	106
Web Application Management: Implementing a Dynamic Database Upgrade Model Richard Wilson and Daniel Lowes.....	112
 <i>Tutorials</i>	
How Google Googles: Reputation on the Internet Andrew Clausen	117
Data Mining in Images Alister Ming Yang Fong and Punarjay Chakravarty	118
Computer Security and Honey Pots Arun Darlie Koshy.....	119
Introduction to Data Mining Kalyanaraman Kaesava Kshetrapalapuram	120
Expert Systems: Development and Current Utility Maurice Han Tong Ling and Jun Yi Loke	121
Introduction to Parallel Programming Yi Nutanong	122
AsTMA! Tutorial Erica Santosaputri	123
Bioinformatics at the WEHI Gordon Smyth	125
Author Index	126