



**UNIVERSITY OF TECHNOLOGY
SYDNEY
SCHOOL OF PHYSICAL SCIENCES**

presents

THE FIRST



MAY 19 & 20

PROCEEDINGS

Copyright 1989 by the Forth Interest Group, Inc.

Individual papers in this volume may be copyrighted by the author(s) or company responsible for the work. The publisher makes no claims for the correctness of the material presented, or for the author's right to publish said material.

A Publication of
The Forth Interest Group
P. O. Box 8231, San Jose, CA 95155

Published in the United States of America

Cover design by Steven Reiling

PROGRAMME

DAY 1 – 19 MAY

9.00 – 9.30	Registration	
9.30 – 9.40	Opening & Welcome	Roy Hill
9.40 – 10.30	Keynote presentation	Charles Moore
10.30 – 10.45	MORNING TEA	

SESSION 1 – FORTH IN EDUCATION

10.45 – 11.15	FORTH in Computer Systems Engineering Education C.A. Maynard (Curtin University)
11.15 – 11.45	Teaching FORTH Feisal Ramadan (TAFE - Nth Sydney)
11.45 – 12.15	Computer Assisted Laboratories with ASYST Dr Tony Pugatschew (SAIT Physics)
12.15 – 12.45	Simulations for CAL in FORTH I. Walsh & D. Bailey (Nepean CAE)
12.45 – 1.30	LUNCH

SESSION 2 – FORTH IN SCIENCE & ENGINEERING

1.30 – 2.00	FORTH and Programmable Controllers Gary Brown (A.I.E. Pty Ltd)
2.00 – 2.30	Design Philosophy of an NC 4016 – Base Microcomputer Roy Hill (Sydney Technical College)
2.30 – 3.15	Protocol Testing Using Forth Steven Leask and Robert McNaughton (Telecom)
3.15 – 3.30	AFTERNOON TEA

SESSION 3 – FORTH APPLICATIONS

3.30 – 4.00	FORTH and Parallel Processing Paul Wilson (QIT)
4.00 – 4.30	ASYST Applications (1) Mike Smart (S.C.A. Pty Ltd)
4.30 – 5.00	PostScript For the FORTH Programmer Sue Hogg (UTS)
7.30 – 10.00	Symposium Dinner, plus an after dinner talk from Charles Moore.

PROGRAMME

DAY 2 – 20 MAY

SESSION 4 – FORTH APPLICATIONS 2

- | | |
|---------------|---|
| 9.00 – 9.30 | THInC – a FORTH Compiler
Klaus Veil (PACE Pty Ltd) |
| 9.30 – 10.00 | Using Execution Arrays & Time Based Operations in FORTH
David Edwards (Jarrah Computers P/L) |
| 10.00 – 10.30 | FORTH Engines Vs Assembly
Ray Gardiner (Ardmona Fruit Products) |
| 10.30 – 10.45 | Morning Tea |
| 10.45 – 11.15 | ASYST Applications (2) in Digital Signal Processing
Robert Prandolini (QIT)
M.P. Mordy (QIT)
J. Miorandi (QIT) |
| 11.15 – 11.45 | FORTH and Prolog on the Forth Machines
Louise Odette (Apex Systems Inc) |

TABLE OF CONTENTS

Topic	Session & Time	Page
1) ASYST Applications (1)	3/4.00 – 4.30	83
2) ASYST Applications (2)	4/10.45 – 11.15	131
3) Computer Assisted Laboratories with ASYST	1/11.45 – 12.15	18
4) Design Philosophy of an NC 4016-Based Microcomputer	2/2.00 – 2.30	48
5) FORTH and Parallel Processing	3/3.30 – 4.00	73
6) FORTH and Programmable Controllers	2/1.30 – 2.00	39
7) FORTH and Prolog on the Forth Machines	4/11.15 – 11.45	139
8) FORTH in Computer Systems Engineering Education	1/10.45 – 11.15	1
9) FORTH Engines Vs Assembly	2/10.00 – 10.30	123
10) PostScript Programming	3/4.30 – 5.00	91
11) Protocol Testing Using FORTH	2/2.30 – 3.15	54
12) Simulations for CAL in FORTH	1/12.15 – 12.45	30
13) Teaching FORTH	1/11.15 – 11.45	6
14) THInC – a FORTH Compiler	4/9.00 – 9.30	95
15) Using Execution Arrays & Time Based Operations	4/9.30 – 10.00	101
16) WORKSHOPS	DAY 2	148