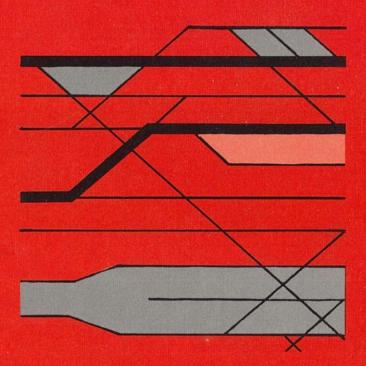
## COMPUTERS IN RAILWAY INSTALLATIONS, TRACK AND SIGNALLING

EDITORS: T.K.S. Murthy, F.E. Young, S. Lehmann and W.R. Smith



Computational Mechanics Publications
Springer-Verlag

## CONTENTS

SECTION 1 INFRASTRUCTURE/FIXED INSTALLATIONS	3
Computer-aided Planning for Major Railway Stations A. Curchod, D. Emery	3
Videopult ITT – A Microcomputer Operated Station Control and Management System.  J. Dvorak	21
The Use of Computers in London Underground's New Ticketing System B. R. Cooper	37
SECTION 2 ROLLING STOCK	
Dynamic Simulation of Railroad Vehicles on a Microcomputer G.F. List	53
A CIM Framework for Railway Vehicle Engineering M. Beal, S.P. Green	67
Managing the Design and Development of a New Bogie Using Modern Computer Based Systems and Techniques K. W. Pennington, D.A. Guyler	83
Design Analysis and Development of Railway Bogies  A. Sutton, D. Razdan	93
BREL Computerised Vehicle and Component Repair Control System R. E. Brown	111
Engineering Computation in London Underground D. Crawley	125
SECTION 3 TRACK	
Automation of Rail Track Design-Computer Programmes Developed at LNEC for the Optimization of Curve Alignment A.L. Macedo, F.A. Branco and A.J. de Castilho	143
KENTRACK, A Computer Program for Design of Railroad Trackbeds Y.H. Huang, J.G. Rose	159
Computer-Controlled Track Machines	175

Temperature Differentials Between Rails and Concrete Bridge Decks F.A. Branco, P. Mendes	185
Computerising London Underground's Track Recording D.L. Bateman	193
SECTION 4 SIGNALLING	
Disturbance Propagation in Transit Systems with Fixed Block Signalling and ATP Control C.K. Chua, B. Mellitt and N.B. Rambukwella	211
Implementing a Microcomputer Software System to Increase Safety of Train Dispatching in Dark Territory R.J. Hipfner, R.E. Wilson and L.C. Berry	227
Belgian Railways Meets CAD P. Maebe, P. Damas	239
The P.C.I. (Microprocessor Controlled Signal Box)  J.F. Gabillet, J. Poré	257
Computer Systems in Railway Signalling G.E. Clark	281
Computer Aided Control of a Relay-Based Signalling System T. Bikker	297
Modern Fail-Safe Microcomputer Systems for Railway Signalling K-H. Wobig	305

.