

# CONTENTS

Preface	v
J.W. Cohen: his scientific career	vii
Scientific publications of J.W. Cohen	xiii

## PART I SURVEYS

Performance evaluation of distributed computer-communication systems	1
<i>L. Kleinrock</i>	
A perspective on queueing models of computer performance	59
<i>S.S. Lavenberg</i>	
Markov processes and teletraffic	95
<i>R. Syski</i>	
Computational methods for queueing models: a review	127
<i>H.C. Tijms</i>	

## PART II THE SINGLE SERVER QUEUE

Approximations for the M/M/1 busy-period distribution	149
<i>J. Abate and W. Whitt</i>	
Storage of the single-server queue	193
<i>E.G. Coffman, Jr. and I. Mitrani</i>	
Sojourn time in an M/G/1 queue with Bernoulli feedback	207
<i>B.T. Doshi and J.S. Kaufman</i>	

## PART III ANALYTIC METHODS IN QUEUEING THEORY

On the relaxation times of open queueing networks	235
<i>J.P.C. Blanc</i>	
Two queues with alternating service and switching times	261
<i>O.J. Boxma and W.P. Groenendijk</i>	

On a system with impatience and repeated calls	283
<i>G. Fayolle and M.A. Brun</i>	
Some comments on the work of J.W. Cohen and new results in the theory of queueing networks	307
<i>P. Le Gall</i>	

## PART IV

### NETWORKS AND COMPUTERS

A recursive aggregation-disaggregation method to approximate large-scale closed queueing networks with multiple job types	325
<i>J.B.M. van Doremalen and J. Wessels</i>	
Reduced state-space heuristics for symmetric Markovian queueing systems	343
<i>M. Hofri</i>	
Insensitivity, sensitivity and partial insensitivity for some queueing models	363
<i>A. Hordijk</i>	
The optimization of queueing and loss networks	375
<i>F.P. Kelly</i>	

## PART V

### QUEUEING MODELS AND RELATED TOPICS

A note on the random walk for the transport and deposition of particles	393
<i>J. Gani</i>	
Asymptotic efficiency results for the method of moments with application to estimation for queueing processes	405
<i>C.C. Heyde</i>	
Regenerative sets and their applications to Markov storage systems	413
<i>H. Kaspi and M. Rubinovitch</i>	
Estimation from an infinite server queueing system with two demands	429
<i>M.J. Phelan and N.U. Prabhu</i>	

## EPILOGUE

Art and science - the greatness and tragedy of applied science	443
<i>A. Jensen</i>	