

## CONTENTS

Foreword	M.L. WILLIAMS . . . . .	vii
Preface – Dynamic Fracture	W.G. KNAUSS . . . . .	ix
Some basic problems in stress wave dominated fracture	W.G. KNAUSS and K. RAVI-CHANDAR . . . . .	[1]
The micro-statistical fracture mechanics approach to dynamic fracture problems	D.A. SHOCKEY, L. SEAMAN and D.R. CURRAN . . . . .	[19]
On the uniqueness of the stress intensity factor–crack velocity relationship	J.W. DALLY, W.L. FOURNEY and G.R. IRWIN . . . . .	[33]
On the dynamic fracture of structural metals	A.J. ROSAKIS and A.T. ZEHNDER . . . . .	[43]
Mechanics of crack curving and branching – a dynamic fracture analysis	M. RAMULU and A.S. KOBAYASHI . . . . .	[61]
Dynamic crack branching in brittle solids	J.P. DEMPSEY and P. BURGERS	[77]
Dynamic fields generated by rapid crack growth	J.D. ACHENBACH, Z.L. LI and N. NISHIMURA . . . . .	[89]
Computational methods based on an energy integral in dynamic fracture	T. NAKAMURA, C.F. SHIH and L.B. FREUND . . . . .	[103]
Numerical studies in dynamic fracture mechanics	S.N. ATLURI and T. NISHIOKA	[119]
Application of dynamic shear crack models to the study of the earthquake faulting process	S. DAS . . . . .	[137]
On the measurement of dynamic fracture toughnesses – a review of recent work	J.F. KALTHOFF . . . . .	[151]
Applications of dynamic fracture mechanics for the prediction of crack arrest in engineering structures	M.F. KANNINEN . . . . .	[173]