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# CONTINUUM DAMAGE MECHANICS THEORY AND APPLICATIONS

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## PREFACE

*While no idea is entirely new, it is pretty agreed that the 1958 seminal study of the creep rupture by Lazar M. Kachanov marks the birthday of what we today know as continuum damage mechanics. In the following years the interest in this new branch of continuum mechanics grew beyond the fondest hopes as it became plainly obvious that damage mechanics represents a rational framework for the treatment of a wide range of brittle phenomena.*

*One of the early enthusiasts and contributors to the development of damage mechanics was also the late professor Anthony Sawczuk, former rector of CISM. It was indeed he who in 1983 broached the idea of organizing a course like this under the auspices of CISM. He planned to take an active participation in the course and only his untimely death prevented him from helping us in this venture. We missed his knowledge and his encouragement.*

*As organizers we attempted to present a balanced view of this rapidly developing field. We reached far and wide geographically and sought people with different opinions and interests. We were sorry that the limits on the number of lectures prevented us from inviting many other worthy researchers in this field.*

*In this brief contact with the CISM administration and an extremely knowledgeable and responsive group of bright young people who attended this course, we were once again assured that the late professor Sawczuk was correct in predicting*

*that this course would have been a success. We only hope that the readers of this monograph will share our enthusiasm for this field and join the steadily growing group of contributors to the development of damage mechanics.*

*The two organizers gratefully acknowledge the financial contributions of CISM and city of Udine, Italy, to the students who attended the course. The financial assistance of the Office of Scientific Research of NATO facilitated our cooperation in organizing this course as well. The help of the administrative staff of CISM during the planning phase of the course and during the course itself was indispensable.*

*Dusan Krajcinovic*

*Jean Lemaitre*

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