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Singularity Theory and its Applications

Warwick 1989, Part II: Singularities, Bifurcations
and Dynamics

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The figure on the front cover shows a genetic caustic in a 3-degree-of-freedom, time-reversible Hamiltonian system, in a neighbourhood of a point of zero momentum. For details see the paper, *Caustics in time-reversible Hamiltonian systems* by J. Montaldi.

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Preface

A year-long symposium on Singularity Theory and its Applications was held at the University of Warwick in the academic year 1988–89. Two workshops were held during the Symposium, the first primarily geometrical and the second concentrating on the applications of Singularity Theory to the study of bifurcations and dynamics. Accordingly, we have produced two volumes of proceedings. One of the notable features of Singularity Theory is the close development of the theory and its applications, and we tried to keep this as part of the philosophy of the Symposium. We believe that we had some success.

It should perhaps be pointed out that not all the papers included in these two volumes were presented at the workshops; these are not Proceedings of the workshops, but of the Symposium as a whole. In fact a considerable amount of the material contained in these pages was developed during the Symposium.

For the record, the Symposium was organized by the four editors of the two volumes: David Mond, James Montaldi, Mark Roberts and Ian Stewart. There were over 100 visitors and 120 seminars. The Symposium was funded by the S.E.R.C., and could not have been such a success without the hard work of Elaine Shiels, to whom we are all very grateful.

Every paper published here is in final form and has been refereed.

Mark Roberts

Ian Stewart

University of Warwick,

August 1990

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