Preface

Astrophysical and geophysical flows as dynamical systems was the theme of the 1998 GFD Summer Program. With Antonello Provenzale at the helm we sailed headlong into the nonlinear world of astrophysical and geophysical fluid mechanics. Simultaneously, Charles Tresser gave several energetic presentations surrounding the dynamics of circle maps.

Unfortunately our third planned speaker, John David Crawford, fell ill just prior to the program and could not participate. Sadly, John David passed away later in the summer. We will remember him at GFD from the excellent lectures he gave at the cottage during the summer of 1993.

In a departure from usual practice, and in an effort to lend more coherence to the, at times, very wide ranging topics discussed at Walsh, GFD98 included three "theme weeks." The first, championed by Steve Meacham, organized a week-long series of lectures on climate dynamics. Alastair Rucklidge subsequently gathered together several experts on bifurcation and pattern theory. Lastly, Diego del Castillo-Negrete organized the "Mixing Week." These themes, and especially the third, proved so popular that we doubled the total number of visitors to the program.

In tandem to the extensive seminar schedule, the fellows progressed significantly in their projects; their reports reflect the impressive progress made. Overall, I believe that 1998 was a particularly productive summer.

Of the participants, Steve Meacham and Eric Chassignet deserve special mention for the maintainance of the computer network. Mike Shelley was voted by the fellows to be the most helpful "tool" amongst the staff. Jean-Luc Thiffeault and Joe Biello were especially appreciated by the fellows and greatly assisted with the preparation of the GFD proceedings. Lastly, I am indebted to Lee Campbell, the real organizer of the summer. It is also my pleasure to acknowledge the support of the Woods Hole Oceanographic Institution, especially John Farrington and the education office, and the National Science Foundation and the Office of Naval Research for the financial backing of the program.

Finally, this summer saw the election of P. J. Morrison to the Steering Committee. I emphasize that this decision was *not* solely due to his expertise at softball.

N. J. Balmforth