

1. FLUID MECHANICS	
J. Norbury (rapporteur of the discussion group)	
<i>Free boundary problems of fluid mechanics</i>	1
J. M. Aitchison	
<i>The numerical solution of free surface flow problems using variable finite elements</i>	6
M. A. Boudourides	
<i>Stability of a free boundary hydrodynamical flow</i>	13
C. Do, P. Guevel	
<i>Waves on a uniform flow in a channel of constant depth</i>	17
M. Emmer, E. Gonzalez, I. Tamanini	
<i>Sets of finite perimeter and capillarity phenomena</i>	29
J. Norbury	
<i>Comparison theorems for flows with vorticity</i>	39
B. Turkington	
<i>Steady flow with vorticity</i>	48
2. THE DAM PROBLEM	
H. W. Alt (rapporteur of the discussion group)	
<i>The dam problem</i>	52
H. W. Alt, G. Gilardi	
<i>The free boundary in the dam problem</i>	69
H. Brezis	
<i>The dam problem revisited</i>	77
J. Carrillo-Menendez, M. Chipot	
<i>On the uniqueness of the solution of the dam problem</i>	88
M. Codenotti, J. F. Rodrigues	
<i>Homogenization of the dam problem with layer-structure</i>	98
S. Huang, Y. Wang	
<i>A free boundary flow well problem for an unbounded domain</i>	105
J. Remar, J. C. Bruch jr., J. M. Sloss	
<i>Seepage from a pond: fixed domain formulation</i>	112
J. F. Rodrigues	
<i>On the free boundary of the evolution dam problem</i>	125

3.	THE POROUS MEDIA EQUATION AND PERCOLATION	
D. G. Aronson (rapporteur of the discussion group)		135
<i>Nonlinear diffusion problems</i>		
D. G. Aronson		150
<i>Some properties of the interface for a gas flow in porous media</i>		
S. Kamin, P. Rosenau		160
<i>Propagation of thermal waves in inhomogeneous media</i>		
J. L. Vazquez		167
<i>Large time behaviour of the solutions of the one-dim. porous media equation</i>		
S. Xiao, C. Zhou		178
<i>Numerical models for infiltration into unsaturated-saturated porous media</i>		
4.	SOIL FREEZING	
M. Frémond (rapporteur of the discussion group)		191
<i>Frost action in soils</i>		
D. Ding		212
<i>Physical nature of frost processes</i>		
R. B. Guenther		223
<i>Freezing in a bounded medium</i>		
5.	GENERALISED PHASE-CHANGE PROBLEMS	
J. R. Ockendon (rapporteur of the discussion group)		231
<i>Generalised phase-change problems</i>		
A. Bermudez, C. Saguez		237
<i>Mathematical formulation and numerical solution of an alloy solidification problem</i>		
R. S. Peckover		248
<i>The modelling of some melting problems</i>		
J. C. W. Rogers		263
<i>The Stefan problem with surface tension</i>		
L. Rubinstein		275
<i>On mathematical models for solid-liquid zones in a two-phase monocomponent system and in binary alloys</i>		
J. Szekely		283
<i>Some mathematical physical and engineering aspects of melting and solidification problems</i>		
B. D. Turland		293
<i>Finite difference front-tracking algorithms for Stefan problems arising in reactor safety studies</i>		
D. G. Wilson, A. D. Solomon, V. Alexiades		306
<i>Progress with simple binary alloy solidification problems</i>		