Contents

Preface v

Alain Joets
Optical caustics and their modelling as singularities (JSPS Forum) 1

Helmut A. Hamm
On local equisingularity 19

Shihoko Ishii, Akiyoshi Sannai, and Kei-ichi Watanabe
Jet schemes of homogeneous hypersurfaces 39

Tatsuhiko Koike
Singularities in relativity (JSPS Forum) 51

Yukio Matsumoto
On the universal degenerating family of Riemann surfaces 71

Yayoi Nakamura and Shinichi Tajima
Algebraic local cohomologies and local b-functions attached to semiquasihomogeneous singularities with $L(f) = 2$ 103

T. Ohmoto,
A note on the Chern–Schwartz–MacPherson class 117

Mutsuo Oka
On mixed projective curves 133

Tomohiro Okuma
Invariants of splice quotient singularities 149

Oswald Riemenschneider
A note on the toric duality between $A_{n,q}$ and $A_{n,n-q}$ 161

Jörg Schürmann
Nearby cycles and characteristic classes of singular spaces 181

Tatsuo Suwa
Residues of singular holomorphic distributions (lecture) 207

Sumio Watanabe
Two birational invariants in statistical learning theory (JSPS Forum) 249

Takehiko Yasuda
Frobenius morphisms of noncommutative blowups 269

Shoji Yokura
Bivariant motivic Hirzebruch class
and a zeta function of motivic Hirzebruch class (lecture) 285

Masahiko Yoshinaga
Minimality of hyperplane arrangements and basis of local system cohomology . . 345