Contents

The Homotopy Type of the Loops on $(n-1)$-Connected $(2n+1)$-Manifolds 1
Samik Basu

Whitehead's Asphericity Question and Its Relation to Other Open Problems 27
A. J. Berrick and J. A. Hillman

Connective K-Theory and the Borsuk–Ulam Theorem 51
M. C. Crabb

Torus Orbifolds with Two Fixed Points 67
Alastair Darby, Shintaro Kuroki and Jongbaek Song

Arc Shift Number for Some Virtual Knots 87
K. Kaur, A. Gill and M. Prabhakar

Exponents of $[\Omega(\mathbb{S}^{r+1}), \Omega(Y)]$ 103
Marek Golasiński, Daciberg Lima Gonçalves and Peter Wong

Mayer–Vietoris Sequence for Differentiable/Diffeological Spaces 123
Norio Iwase and Nobuyuki Izumida

Homological Infinity of 4D Universe for Every 3-Manifold 153
Akio Kawauchi

Nielsen Theory on Nilmanifolds of the Standard Filiform Lie Group 177
Jong Bum Lee and Won Sok Yoo

Lickorish-type Construction of Manifolds Over Simple Polytopes 197
Zhi Lü, Wei Wang and Li Yu

KO-Groups of Stunted Complex and Quaternionic Projective Spaces 215
Aniruddha C. Naolekar and Ajay Singh Thakur

The Vector Field Problem for Homogeneous Spaces 223
Parameswaran Sankaran

On a Construction for the Generators of the Polynomial Algebra as a Module Over the Steenrod Algebra 265
Nguyễn Sum

Stellar Stratifications on Classifying Spaces 287
Dai Tamaki and Hiro Lee Tanaka