

ISSN 0027-7630

# NAGOYA MATHEMATICAL JOURNAL

Volume 238

June 2020

Published by  
Cambridge University Press on behalf of  
Foundation Nagoya Mathematical Journal

# NAGOYA MATHEMATICAL JOURNAL

## Editors

- de Bouard, Anne  
*École Polytechnique, CMAP, Palaiseau*
- Gallagher, Isabelle  
*École Normale Supérieure, Paris*
- Hesselholt, Lars (*Managing Editor*)  
*Nagoya University and*  
*University of Copenhagen*
- Hirachi, Kengo  
*University of Tokyo*
- Honda, Ko  
*University of California, Los Angeles*
- Iyama, Osamu  
*Nagoya University*
- Kedlaya, Kiran  
*University of California, San Diego*
- Kondo, Shigeyuki  
*Nagoya University*
- Ngô, Bào Châû  
*University of Chicago*
- Takahashi, Ryo  
*Nagoya University*

## Associate Editors

- Bona, Jerry L.  
*University of Illinois at Chicago*
- Fukaya, Kenji  
*Simons Center for Geometry and Physics, Stony Brook*
- Liu, Ruochuan  
*Peking University*
- Mori, Shigefumi  
*RIMS, Kyoto University*
- Mukai, Shigeru  
*Chinese Academy of Sciences, China*
- Noguchi, Junjiro  
*University of Tokyo*
- Shoji, Toshiaki  
*Tongji University, Shanghai*
- Tamagawa, Akio  
*RIMS, Kyoto University*

# NAGOYA MATHEMATICAL JOURNAL

Volume 238

June 2020

## CONTENTS

---

|   |     |
|---|-----|
| <b>Coskun, I. and Huijenga, J.</b> : Brill–Noether theorems and globally generated vector bundles on Hirzebruch surfaces .....  | 1   |
| <b>Cao, P., Huang, M. and Li, F.</b> : A conjecture on $C$ -matrices of cluster algebras.....   | 37  |
| <b>Croll, A., Dellaca, R., Gupta, A., Hoffmeier, J., Mukundan, V., Şega, L. M., Sosa, G., Thompson, P. and Tracy, D. R.</b> : Detecting Koszulness and related homological properties from the algebra structure of Koszul homology ..... | 47  |
| <b>Kikuta, K., Shiraishi, Y. and Takahashi, A.</b> : A note on entropy of auto-equivalences: lower bound and the case of orbifold projective lines.....   | 86  |
| <b>Koike, T.</b> : Higher codimensional Ueda theory for a compact submanifold with unitary flat normal bundle.....  | 104 |
| <b>Skodlerack, D. and Stevens, S.</b> : Intertwining semisimple characters for $p$ -adic classical groups.....  | 137 |
| <b>Dummit, D. S.</b> : A note on the equivalence of the parity of class numbers and the signature ranks of units in cyclotomic fields .....   | 206 |

