

# Juliette Bruce

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## Pre-Prints

14. J. Bruce, L. Cranton Heller, M. Sayrafi. Bounds on Multigraded Regularity. *Submitted*. E-Print: [arXiv:2208.11115](https://arxiv.org/abs/2208.11115)
13. J. Bruce, L. Cranton Heller, M. Sayrafi. Characterizing Multigraded Regularity on Products of Projective Space. *Submitted*. E-Print: [arXiv:2110.10705](https://arxiv.org/abs/2110.10705)
12. J. Bruce. Asymptotic Syzygies in the Setting of Semi-Ample Growth. *Submitted*. E-Print: [arXiv:1904.04944](https://arxiv.org/abs/1904.04944)

## Publications

11. M. Brandt, J. Bruce, M. Chan, M. Melo, G. Moreland, C. Wolfe. On the Top-weight Cohomology of  $\mathcal{A}_g$ . *Geometry & Topology*, To appear. E-Print: [arXiv:2012.02892](https://arxiv.org/abs/2012.02892)
10. J. Bruce, D. Corey, D. Erman, S. Goldstein, R. Laudone, and J. Yang. Syzygies of  $\mathbb{P}^1 \times \mathbb{P}^1$ : Data and Conjectures. *Journal of Algebra*, **593** (2022) no. 1, 589-621. E-Print: [arXiv:2104.14598](https://arxiv.org/abs/2104.14598)
9. J. Bruce, D. Erman, S. Goldstein, and J. Yang. The Schur-Veronese package in Macaulay2. *Journal of Software for Algebra and Geometry*, **11** (2021), 83-87 E-print: [arXiv:1905.12661](https://arxiv.org/abs/1905.12661).
8. J. Bruce. The Quantitative Behavior of Asymptotic Syzygies for Hirzebruch Surfaces. *Journal of Commutative Algebra*, To appear. E-Print: [arXiv:1906.07333](https://arxiv.org/abs/1906.07333).
7. A. Almousa, J. Bruce, M. Loper, and M. Sayrafi. The Virtual Resolutions Package for Macaulay2. *Journal of Software for Algebra and Geometry*, **10** (2020), 50-60. E-print: [arXiv:1905.07022](https://arxiv.org/abs/1905.07022).
6. J. Bruce and D. Erman. A probabilistic approach to systems of parameters and Noether normalization. *Algebra and Number Theory*, **13** (2019), no. 9, 2081-2102. E-print: [arXiv:1604.01704](https://arxiv.org/abs/1604.01704).
5. J. Bruce and W. Li. Effective bounds on the dimensions of Jacobians covering abelian varieties. *Proc. Amer. Math. Soc.*, **148** (2020), no. 2, 535-551. E-print: [arXiv:1804.11015](https://arxiv.org/abs/1804.11015).
4. J. Bruce, D. Erman, S. Goldstein, and J. Yang. Conjectures and computations about Veronese syzygies. *Experimental Mathematics*, **29** (2020), 398-413. E-print: [arXiv:1711.03513](https://arxiv.org/abs/1711.03513).
3. M. Brandt, J. Bruce, T. Brysiewicz, R. Krone, and E. Robeva. The degree of  $SO(n)$ . *Combinatorial Algebraic Geometry*, 207-224, Fields Inst. Commun. **80** (2017). E-print: [arXiv:1701.03200](https://arxiv.org/abs/1701.03200).

2. J. Bruce, M. Logue, and R. Walker. Monomial valuations, cusp singularities, and continued fractions. *Journal of Commutative Algebra*, **7** (2015) no. 4, 495-522. E-print: [arXiv:1311.6493](https://arxiv.org/abs/1311.6493).
1. J. Bruce, P. Kao, E. Nash, B. Perez, and P. Vermeire. Betti tables of reducible algebraic curves. *Proc. Amer. Math. Soc.* **142** (2014) 4039-4051. E-print: [arXiv:1210.3064](https://arxiv.org/abs/1210.3064).

## Software

4. SchurVeronese, (with D. Erman, S. Goldstein, and J. Yang). Submitted for distribution with future releases of Macaulay2, a compute algebra system focused on computations in algebraic geometry and commutative algebra.
3. VirtualResolutions, (with A. Almousa, M. Loper, and M. Sayrafi). Distributed with version 1.14+ of Macaulay2 (2019).
2. FrobeniusThresholds, (with D. Hernández, K. Schwede, D. Smolkin, P. Teixeira, and E. Witt). Distributed with version 1.14+ of Macaulay2 (2019).
1. TestIdeals, (with E. Bela, A. Boix, D. Ellingson, D. Hernández, Z. Kadyrsizova, M. Katzman, S. Malec, M. Mastroeni, M. Mostafazadehfard, M. Robinson, K. Schwede, D. Smolkin, P. Teixeira, and E. Witt). Distributed with version 1.14+ of Macaulay2 (2019).

## Non-Research Articles

2. J. Bruce. A Word from... Juliette Bruce, Inaugural President of Spectra. *Notices of the AMS*, **69** (2022) no. 6, 898–899.
1. A. Bonato, J. Bruce, and R. Buckmire. Spaces for All: The Rise of LGBTQ+ Mathematics Conferences. *Notices of the AMS*, **68** (2021) no. 6, 998-1003. <https://doi.org/10.1090/noti2288>

## Multimedia

1. [SyzygyData.com](https://syzygydata.com), (with D. Erman, S. Goldstein, and J. Yang). An online public database on large-scale syzygy computations.