

# Tim Römer

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## List of publications

### Articles

- [1] Jennifer Biermann, Hernán De Alba, Federico Galetto, Satoshi Murai, Uwe Nagel, Augustine O'Keefe, Tim Römer, and Alexandra Seceleanu. *Betti numbers of symmetric shifted ideals*. J. Algebra **560** (2020), 312–342.
- [2] Jens Grygierek, Martina Juhnke-Kubitzke, Matthias Reitzner, Tim Römer, and Oliver Röndigs. *Gigantic random simplicial complexes*. Homology Homotopy Appl. **22** (2020), 297–318.
- [3] Stefan Kunis, Tim Römer, and Ulrich von der Ohe. *Learning algebraic decompositions using Prony structures*. Adv. in Appl. Math. **118** (2020), Article ID 102044, 43p.
- [4] Dinh Van Le and Tim Römer. *A Kruskal-Katona type result and applications*. Discrete Math. **343** (2020), Article ID 111801, 12p.
- [5] Dinh Van Le, Uwe Nagel, Hop D. Nguyen, and Tim Römer. *Castelnuovo-Mumford regularity up to symmetry*. To appear in Int. Math. Res. Not. IMRN (2020).  
<https://doi.org/10.1093/imrn/rnz382>.
- [6] Dinh Van Le, Uwe Nagel, Hop D. Nguyen, and Tim Römer. *Codimension and projective dimension up to symmetry*. Math. Nachr. **293** (2020), 346–362.
- [7] Uwe Nagel and Tim Römer. *FI- and OI-modules with varying coefficients*. J. Algebra **535** (2019), 286–322.
- [8] Tim Römer and Sara Saeedi Madani. *Retracts and algebraic properties of cut algebras*. European J. Combin. **69** (2018), 214–236.
- [9] Uwe Nagel and Tim Römer. *Equivariant Hilbert series in non-noetherian polynomial rings*. J. Algebra **486** (2017), 204–245.
- [10] Stefan Kunis, Thomas Peter, Tim Römer, and Ulrich von der Ohe. *A multivariate generalization of Prony's method*. Linear Algebra Appl. **490** (2016), 31–47.
- [11] Aldo Conca, Srikanth B. Iyengar, Hop D. Nguyen, and Tim Römer. *Absolutely Koszul algebras and the Backelin-Roos property*. Acta Math. Vietnam. **40** (2015), 353–374.
- [12] Uwe Nagel and Tim Römer. *Criteria for componentwise linearity*. Comm. Algebra **43** (2015), 935–952.
- [13] Emanuela De Negri and Tim Römer. *Initial algebras of Pfaffian rings*. J. Commut. Algebra **5** (2013), 151–170.

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- [14] Dinh Van Le and Tim Römer. *Broken circuit complexes and hyperplane arrangements*. J. Algebraic Combin. **38** (2013), 989–1016.
- [15] Tim Römer and Kirsten Schmitz. *Generic tropical varieties*. J. Pure Appl. Algebra **216** (2012), 140–148.
- [16] Winfried Bruns, Aldo Conca, and Tim Römer. *Koszul homology and syzygies of Veronese subalgebras*. Math. Ann. **351** (2011), 761–779.
- [17] Aldo Conca and Tim Römer. *Generic initial ideals and fibre products*. Osaka J. Math. **47** (2010), 17–32.
- [18] Tim Römer. *Betti numbers and shifts in minimal graded free resolutions*. Illinois J. Math. **54** (2010), 449–467.
- [19] Tim Römer and Kirsten Schmitz. *Algebraic properties of generic tropical varieties*. Algebra Number Theory **4** (2010), 465–491.
- [20] Bogdan Ichim and Tim Römer. *On canonical modules of toric face rings*. Nagoya Math. J. **194** (2009), 69–90.
- [21] Srikanth B. Iyengar and Tim Römer. *Linearity defects of modules over commutative rings*. J. Algebra **322** (2009), 3212–3237.
- [22] Gesa Kämpf and Tim Römer. *Homological properties of Orlik-Solomon algebras*. Manuscripta Math. **129** (2009), 181–210.
- [23] Morten Brun and Tim Römer. *On algebras associated to partially ordered sets*. Math. Scand. **103** (2008), 169–185.
- [24] Winfried Bruns, Robert Koch, and Tim Römer. *Gröbner bases and Betti numbers of monoidal complexes*. Michigan Math. J. **57** (2008). Special volume in honor of Melvin Hochster, 71–91.
- [25] Juan Migliore, Uwe Nagel, and Tim Römer. *Extensions of the multiplicity conjecture*. Trans. Amer. Math. Soc. **360** (2008), 2965–2985.
- [26] Uwe Nagel and Tim Römer. *Glicci simplicial complexes*. J. Pure Appl. Algebra **212** (2008), 2250–2258.
- [27] Uwe Nagel, Tim Römer, and Natale Paolo Vinai. *Algebraic shifting and exterior and symmetric algebra methods*. Comm. Algebra **36** (2008), 208–231.
- [28] Tim Römer. *On the regularity over positively graded algebras*. J. Algebra **319** (2008), 1–15.
- [29] Morten Brun, Winfried Bruns, and Tim Römer. *Cohomology of partially ordered sets and local cohomology of section rings*. Adv. Math. **208** (2007), 210–235.
- [30] Winfried Bruns and Tim Römer.  *$h$ -vectors of Gorenstein polytopes*. J. Combin. Theory Ser. A **114** (2007), 65–76.
- [31] Bogdan Ichim and Tim Römer. *On toric face rings*. J. Pure Appl. Algebra **210** (2007), 249–266.

- [32] Winfried Bruns, Ping Li, and Tim Römer. *On seminormal monoid rings*. J. Algebra **302** (2006), 361–386.
- [33] Uwe Nagel and Tim Römer. *Extended degree functions and monomial modules*. Trans. Amer. Math. Soc. **358** (2006), 3571–3589.
- [34] Morten Brun and Tim Römer. *Subdivisions of toric complexes*. J. Algebraic Combin. **21** (2005), 423–448.
- [35] Winfried Bruns, Tim Römer, and Attila Wiebe. *Initial algebras of determinantal rings, Cohen-Macaulay and Ulrich ideals*. Michigan Math. J. **53** (2005), 71–81.
- [36] Juan Migliore, Uwe Nagel, and Tim Römer. *The multiplicity conjecture in low codimensions*. Math. Res. Lett. **12** (2005), 731–747.
- [37] Tim Römer. *Note on bounds for multiplicities*. J. Pure Appl. Algebra **195** (2005), 113–123.
- [38] Morten Brun and Tim Römer. *Betti numbers of  $\mathbb{Z}^n$ -graded modules*. Comm. Algebra **32** (2004), 4589–4599.
- [39] Tim Römer. *Bounds for Betti numbers*. J. Algebra **249** (2002), 20–37.
- [40] Tim Römer. *Cohen-Macaulayness and squarefree modules*. Manuscripta Math. **104** (2001), 39–48.
- [41] Tim Römer. *Generalized Alexander duality and applications*. Osaka J. Math. **38** (2001), 469–485.
- [42] Tim Römer. *Homological properties of bigraded algebras*. Illinois J. Math. **45** (2001), 1361–1376.

## Articles in books and conference proceedings

- [43] Martina Juhnke-Kubitzke, Dinh Van Le, and Tim Römer. *Asymptotic Behavior of Symmetric Ideals: A Brief Survey*. In: *Combinatorial structures in algebra and geometry*. Vol. 331. Springer Proc. Math. Stat. Springer, 2020, 73–94.
- [44] Winfried Bruns, Aldo Conca, and Tim Römer. *Koszul cycles*. In: *Combinatorial aspects of commutative algebra and algebraic geometry*. Vol. 6. Abel Symp. Springer, Berlin, 2011, 17–33.

## Books

- [45] Aldo Conca, Joseph Gubeladze, and Tim Römer, eds. *Homological and computational methods in commutative algebra*. Vol. 20. Springer INdAM Series. Dedicated to Winfried Bruns on the occasion of his 70th birthday, Papers based on the INdAM Conference held in Cortona, May 30–June 3, 2016. Springer, Cham, 2017, xii + 256.

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