

# Thomas Yahl

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**Profile** I am a Ph.D. student at Texas A&M University working in applied algebraic geometry under Dr. Frank Sottile. My interests include numerical and symbolic computation of Galois groups in enumerative geometry and their applications.

**Education** (2017-Present) Texas A&M University  
Ph.D. Mathematical Sciences  
  
(2013-2017) Indiana University-Purdue University of Indianapolis  
B.A. Mathematical Sciences (Honors)  
Minor Computer Science

**Research** "Galois Groups in Enumerative Geometry and Applications", 2021. [arxiv:2108.07905](https://arxiv.org/abs/2108.07905)  
  
"Polyhedral Homotopies in Cox Coordinates", 2020. [arxiv:2012.04255](https://arxiv.org/abs/2012.04255)  
  
"Decomposable Sparse Polynomial Systems", [Journal of Software for Algebra and Geometry Vol. 11 \(2021\), 53-59](#)  
  
"Solving Decomposable Sparse Systems", [Numerical Algorithms](#) **88**, 453-474 (2021)  
  
Eigenfunctions to Composition Operators of Generalized Linear Fractional Maps, 2015.  
Presented at Indiana Undergraduate Math Research Conference.

**Talks** SIAM Conference on Applied Algebraic Geometry, "Cox Homotopies"  
  
Freie Universität, Discrete Geometry Seminar, "Solving Decomposable Sparse Polynomial Systems"  
  
Max-Planck-Institut für Mathematik, Seminar on Nonlinear Algebra, "Solving Decomposable Sparse Polynomial Systems"  
  
Technische Universität Braunschweig, Oberseminar Applied Algebra and Analysis, "Solving Decomposable Sparse Polynomial Systems"  
  
Technische Universität Berlin, Kolloquium on algorithmic mathematics and complexity theory, "Solving Decomposable Sparse Polynomial Systems"  
  
SIAM TX-LA Section Second Annual Meeting, "Galois Groups and Decomposable Branched Covers"

**Honors** Recipient of TAMU AFS Merit Fellowship in Mathematics  
Recipient of Outstanding TA Award  
Aided undergraduates in Mathematics REU programs  
Secretary of the Texas A&M University chapter of the AMS  
Mentored in the graduate student Peer Mentoring Program at Texas A&M