

Karl Schwede – Biographical Sketch

PROFESSIONAL PREPARATION **Bellevue Community College, Arts and Sciences** **A.A.S., June 1997**
 Whitman College, Mathematics **B.A., June 1999**
 University of Washington, Mathematics **Ph.D., August 2006**
 University of Michigan, Postdoc **Sept. 2006–2010**

APPOINTMENTS **University of Utah, Salt Lake City UT** **Fall 2018**
 Professor **–present**

 University of Utah, Salt Lake City UT **Fall 2014**
 Associate Professor **–Sum. 2018**

 The Pennsylvania State University, University Park PA **Winter 2011**
 Assistant Professor **–Sum. 2014**

 University of Utah, Salt Lake City UT **Fall 2010**
 Visiting Assistant Professor

 MSRI, Berkeley CA **Winter 2009,**
 Research Member **Spring 2013,**
 Spring 2019

 University of Michigan, Ann Arbor MI **Fall 2006**
 Postdoctoral Assistant Professor / Research Fellow **–Spring 2010**

 University of Washington, Seattle WA **2000–2006**
 Teaching Assistant and Instructor

PUBLICATIONS MOST RELATED TO PROJECT **1.** L. Ma, K. Schwede, *Perfectoid multiplier/test ideals in regular rings and bounds on symbolic powers*. *Invent. Math.* 214 (2018), no. 2, 913–955.
 2. J. Carvajal-Rojas, K. Schwede, K. Tucker, *Fundamental groups of F -regular singularities via F -signature*. *Ann. Sci. Éc. Norm. Supér.* (4) 51 (2018), no. 4, 993–1016.
 3. L. Ma, K. Schwede, *Singularities in mixed characteristic via big Cohen-Macaulay algebras*. Submitted (2018), [arXiv:1806.09567](https://arxiv.org/abs/1806.09567), 53 pages.
 4. L. Ma, K. Schwede, K. Tucker, J. Waldron, J. Witaszek, *An analog of adjoint ideals and PLT singularities in mixed characteristic*. Submitted (2020), [arXiv:1910.14665](https://arxiv.org/abs/1910.14665), 47 pages.
 5. *F-adjunction*. *Algebra & Number Theory*. 3, (2009), no. 8, 907–950.

OTHER RELEVANT PUBLICATIONS **1.** K. Schwede, *A canonical linear system associated to adjoint divisors in characteristic $p > 0$* . *J. Reine Angew. Math.* 696 (2014), 69–87.

OTHER
RELEVANT
PUBLICATIONS
continued

2. Z. Patakfalvi, K. Schwede, W. Zhang, *F-singularities in families*, . *Algebr. Geom.* 5 (2018), no. 3, 264–327.
3. M. Blickle, K. Schwede, K. Tucker, *F-singularities via alterations*. *Amer. J. Math.* 137 (2015), no. 1, 61–109.
4. K. Schwede, K. Tucker, *On the behavior of test ideals under finite morphisms*. *J. Algebraic Geom.* 23 (2014), no. 3, 399–443.
5. *F-injective singularities are Du Bois*, K. Schwede. *Amer. J. Math.* 131 (2009), no. 2, 445–473.

SYNERGISTIC
ACTIVITIES

- Macaulay2 package development jointly with undergraduates: **2013**
–**present**
`Divisor.m2`, `Pullback.m2`, `Seminormalization.m2`,
`FastLinAlg.m2`
- Cryptography summer camp for highschool students, at Penn. State twice and at U. of Utah once **2013, 2014**
& **2016**
- Co-organizer of the conference: **2016**
Higher Dimensional Algebraic Geometry, University of Utah, July 18-26, 2016.
- Co-organizer of the workshop: **2016**
Intensive Workshop for Macaulay2 Development, University of Utah, May 7-10, 2016.
- Co-organizer of the *Mathematical Research Communities Workshop on Commutative Algebra* held at Snowbird Utah, June 7-13th, 2015. **2015**