PUBLICATION LIST

HUI YU

0.1. Free boundary problems.

- (With X. Fernández-Real) Generic properties in free boundary problems, *preprint.*
- (With S. Eberle) Solutions to the nonlinear obstacle problem with compact contact sets, *preprint.*
- (With S. Eberle) Compact contact sets of sub-quadratic solutions to the thin obstacle problem, *preprint.*
- (With M. Engelstein and X. Fernández-Real) Graphical solutions to one-phase free boundary problems, *accepted by Crelle's Journal.*
- (With O. Savin) Free boundary regularity in the multiple membrane problem in the plane, *accepted by Crelle's Journal.*
- (With O. Savin) Half-space solutions with 7/2 frequency in the thin obstacle problem, *accepted by Arch. Ration. Mech. Anal..*
- (With O. Savin) Contact points with integer frequencies in the thin obstacle problem, *accepted by Comm. Pure and Appl. Math..*
- (With O. Savin) On the fine regularity of the singular set in the nonlinear obstacle problem, *accepted by Nonlin. Anal..*
- (With Y. Wu) On the fully nonlinear Alt-Phillips equation, *accepted by International Math. Research Notice.*
- (With O. Savin) Free boundary regularity in the triple membrane problem, *accepted by Ars Inveniendi Analytica.*
- (With O. Savin) Regularity of the singular set in the fully nonlinear obstacle problem. *accepted by J. Euro. Math. Soc..*
- (With O. Savin) On the multiple membranes problem. *J. Funct. Anal. 277 (2019), no. 6, 1581-1602.*
- An optimization problem in heat conduction with minimal temperature constraint, interior heating and exterior insulation. *Cal. Var. PDEs 55 (2016), no. 6, 1-15.*

0.2. Optimal transport and the Monge-Ampère equation.

- (With O. Savin) Global $W^{2,1+\varepsilon}$ estimates for Monge-Ampère equation with natural boundary condition. *J. Math. Pures. Appl. 137 (2020), no. 9, 275-289.*
- (With O. Savin) Regularity of optimal transport between planar convex domains. *Duke Math. J. 169 (2020), no. 7, 1305-1327.*

0.3. Motion of sets and geometric flow.

- (With L. Caffarelli) A curvature flow in the plane with a nonlocal term. *Calc. Var. (2018) 57:29.*
- Motion of sets by curvature and derivative of capacity potential. *J. Differential Equations 267 (2019), no. 1, 15-60.*

0.4. **Nonlocal elliptic equations.**

- (With V. Millot, Y. Sire) Minimizing fractional harmonic maps on the real line in the supercritical regime. *Discrete and Continuous Dynamical Systems-A 38 (2018), no. 12, 6195-6214.*
- Unique continuation of fractional orders of elliptic equations. *Annals of PDE (2017) 3:16.*
- Small perturbation solutions for nonlocal elliptic equations. *Comm. in PDEs 42 (2017), no. 1, 142-158.*
- A Dirichlet problem for nonlocal degenerate elliptic operators with interior nonlinearity. *J. Math. Anal. Appl. 448 (2017), no. 1, 326-346.*
- $W^{\sigma,\varepsilon}$-estimates for nonlocal elliptic equations. *Annales de l'Institut H. Poincaré-C 34 (2017), no. 5, 1141-1153.*
- Smooth solutions to a class of nonlocal fully nonlinear ellipitc equations. *Indiana Math. J 66 (2017), no. 6, 1895-1919.*

0.5. **Analysis on fractals.**

- (With S. Aaron, Z. Conn, R. Strichartz) Hodge-de Rham theory on fractal graphs and fractals. *Comm. Pure Appl. Anal. 13 (2014), no. 2, 903-928.*

0.6. **Expository.**

- A brief survey on the obstacle problem. *To appear in Proceedings of the 8th International Congress of Chinese Mathematicisn.*
- What is a generalized mean-curvature flow? *Notices of AMS 64 (2017), no. 6, 580-581.*