

[nlnl-workshop1.karlin.mff.cuni.cz/](http://nlnl-workshop1.karlin.mff.cuni.cz/)

## Organisers

**Anna Balci**,  
Charles University, Prague

**Amiran Gogatishvili**,  
Czech Academy of Sciences

**Kim Myyryläinen**,  
Charles University, Prague

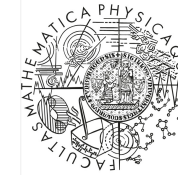
**Simon Nowak**,  
Bielefeld University



**Workshop Website**



**Archibald City Hotel**  
Žitná 1319



**FACULTY  
OF MATHEMATICS  
AND PHYSICS**  
Charles University



Institute of Mathematics  
Czech Academy of Sciences

# Nonlocal nonlinear

**Workshop I in Prague**

**26th – 28th November, 2024**



Supported by



## Tuesday, 26th

- 09:00 **Registration and opening**
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- 09:15 **Special session dedicated to Aleš Nekvinda**  
Chair: Gogatishvili
- 10:15-11:00 **Coffee**
- 11:00-11:40 **Cristiana De Filippis** (Parma)  
Chair: Balci  
 *$\mu$ -ellipticity and nonautonomous integrals*
- 11:40-12:20 **Sun-Sig Byun** (Seoul)  
*Calderón-Zygmund estimates for non-uniformly elliptic equations with matrix weights*
- 12:20-14:00 **Lunch**
- 14:00-14:40 **Marvin Weidner** (Barcelona)  
Chair: Mingione  
*Boundary regularity for nonlocal equations*
- 14:40-15:20 **Luboš Pick** (Prague)  
*Fractional Orlicz-Sobolev spaces - subcritical case*
- 15:20-16:00 **Coffee**
- 16:00-16:40 **Simon Nowak** (Bielefeld)  
Chair: Sire  
*Nonlinear nonlocal potential theory at the gradient level*
- 16:40-17:20 **Naian Liao** (Salzburg)  
*Time-insensitive nonlocal parabolic Harnack estimates*
- 17:20 **Poster session and welcome**

## Wednesday, 27th

- 09:30-10:10 **Giuseppe Mingione** (Parma)  
Chair: Dong  
*Partial regularity in nonlocal problems*
- 10:10-10:50 **Lars Diening** (Bielefeld)  
*Fractional Sobolev spaces with degenerate weights*
- 10:50-11:30 **Coffee**
- 11:30-12:10 **Daniel Hauer** (Cottbus)  
Chair: De Filippis  
*An extension problem for the logarithmic Laplacian*
- 12:15-14:00 **Conference Picture and Lunch**
- 14:00-14:40 **Yannick Sire** (Johns Hopkins University)  
Chair: Nowak  
*Geometric measure of nodal, critical and singular sets for solutions of degenerate equations*
- 14:40-15:20 **Bianca Stroffolini** (Naples)  
*A journey across problems with general growth*
- 15:20-16:00 **Coffee**
- 16:00-16:40 **Abner J. Salgado** (Tennessee)  
Chair: Diening  
*A Semi-Analytic Diagonalization FEM for the Spectral Fractional Laplacian*
- 16:40-17:20 **Alex Kaltenbach** (Berlin)  
*Finite element approximations of a simplified model for smart fluids*
- 19:00 **Dinner: Pivovar Narodni**

## Thursday, 28th

- 09:30-10:10 **Hongjie Dong** (Brown University)  
Chair: Gmeineder  
*Degenerate elliptic and parabolic equations with distributional boundary data*
- 10:10-10:50 **Lenka Slavikova** (Prague)  
*Fractional Orlicz-Sobolev spaces - supercritical case*
- 10:50-11:30 **Coffee**
- 11:30-12:10 **Franz Gmeineder** (Konstanz)  
Chair: Weidner  
*Higher gradient integrability for BD-minimizers*
- 12:10-12:50 **Lyoubomira Softova** (Salerno)  
*Boundedness of the solutions of a kind of nonlinear parabolic systems*
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- 12:50-13:00 **Closing**
- 13:00 **Lunch**