

Regularity theory for a class of variable-exponent fully nonlinear elliptic equations

Anne Bronzi¹, Edgard Pimentel², Giane Rampasso¹,
Eduardo Teixeira³

¹ University of Campinas

² Pontifical Catholic University of Rio de Janeiro

³ University of Central Florida

In this talk we will explore the regularity of viscosity solutions for a class of variable-exponent, degenerate/singular elliptic equations in non-divergence form. More precisely, we will prove that viscosity solutions to the equation $|Du|^{\theta(x)}F(D^2u) = f(x)$, where F is a uniformly elliptic operator and θ satisfies mild conditions, are locally of class $C^{1,\alpha}$.