This talk is concerned with the boundary regularity for minimizers of functionals of double phase with variable exponents:

$$\int_{\Omega} \left( |D u|^{p(x)} + a(x)|D u|^{q(x)} \right) \, dx,$$

where $\Omega \subset \mathbb{R}^m$ is a bounded domain with sufficiently smooth boundary $\partial \Omega$, $a(\cdot), p(\cdot), q(\cdot)$ are functions satisfying the following conditions:

- $a(\cdot) \geq 0$, $a(\cdot) \in C^{0,\alpha}(\overline{\Omega})$,
- $p(\cdot), q(\cdot) \in C^{0,\sigma}(\overline{\Omega})$,
- $1 < p(x) \leq q(x) \quad \forall x \in \Omega$, $\sup_{\Omega}(q(x) - p(x)) < \min\{\alpha, \sigma\}$,

and

$$|\xi|_g := (\delta_{ij} g^{\alpha\beta}(x) \xi^i \xi^j)^{1/2}$$

for a positive definite matrix $g(\cdot) = (g^{\alpha\beta}(\cdot))$ with continuous $g^{\alpha\beta}(\cdot)$.

We prove the following results ([1]): The minimizer of the above functional with suitable Dirichlet boundary condition is Hölder continuous up to the boundary. When $g$ is Hölder continuous, we see also that $D u$ is locally Hölder continuous.