



**A unified approach to degenerate problems in the half-space**  
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**Abstract.** We study elliptic and parabolic problems governed by the singular elliptic operators

$$\mathcal{L} = y^{\alpha_1} \Delta_x + y^{\alpha_2} \left( D_{yy} + \frac{c}{y} D_y - \frac{b}{y^2} \right), \quad \alpha_1, \alpha_2 \in \mathbb{R}$$

in the half-space  $\mathbb{R}_+^{N+1} = \{(x, y) : x \in \mathbb{R}^N, y > 0\}$ .

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