

Exact pressure

 $u_t + 0.969(uu_x + vu_y) = -p_x + 0.00113(u_{xx} + u_{yy})$ 

 $v_t + 0.969(uv_x + vv_y) = -p_y + 0.00113(v_{xx} + v_{yy})$ 

Predicted pressure

Identified PDE (clean data)

Correct PDE 
$$\begin{aligned} u_t + (uu_x + vu_y) &= -p_x + 0.001(u_{xx} + u_{yy}) \\ v_t + (uv_x + vv_y) &= -p_y + 0.001(v_{xx} + v_{yy}) \end{aligned}$$
 Identified PDE (clean data) 
$$\begin{aligned} u_t + 0.969(uu_x + vu_y) &= -p_x + 0.00113(u_{xx} + u_{yy}) \\ v_t + 0.969(uv_x + vv_y) &= -p_y + 0.00113(v_{xx} + v_{yy}) \end{aligned}$$