Similarity Solutions of a Heated Vertical Wall Immersed in a Stratified Environment ZACHARY ZIKOSKI, SAMUEL PAOLUCCI, University of Notre Dame — Free convective flow along a heated vertical wall immersed in a thermally stratified environment is studied using Lie group theory. The symmetries admitted by the governing system of boundary layer equations are identified along with the admitted classes of temperature stratifications. The cases of both prescribed wall temperature and prescribed wall heat flux are considered. The resulting similarity variables, the reduced systems of equations and their corresponding solutions are presented for each class of temperature stratification.

Samuel Paolucci
University of Notre Dame

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