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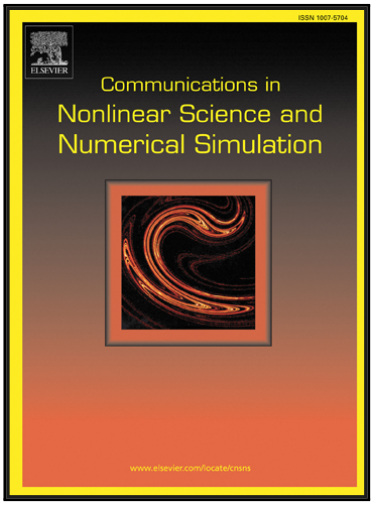

Analytical solutions to mixed convection MHD fluid flow induced by a nonlinearly deforming permeable surface

M. Turkyilmazoglu

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Highlights

- Mixed convection flow and temperature fields are presented in closed-form solutions.
- Unique exact solutions are found for the stretching walls.
- Momentum and temperature layers thicknesses are reduced as per the magnetic field.
- Dual exact solutions are detected for the shrinking surfaces.
- Upper branch solutions are more cooled leading to higher heat transfer rate.

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