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Multiple Hopf bifurcations and flow dynamics inside a 2D singular lid driven cavity

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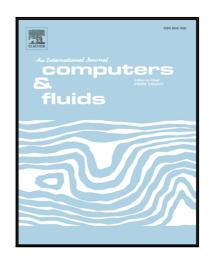
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#### ACCEPTED MANUSCRIPT

### Highlights

- Hopf bifurcation phenomenon for singular LDC problem is studied
- Existence of universal critical Reynolds number for primary bifurcation is discussed
- Description of the flow is given, including contour plots and vorticity time series
- A complete database of frequencies involved in this flow is provided.
- Sensibility of this problem to numerical experiment conditions is explored

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