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Modeling and Experimental Identification of Contact Pressure and Friction for the Analysis of Non-conforming Elastic Contact

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**Highlights**

- An experiment-based modeling and identification method is proposed for the reconstruction of stress distribution on non-conforming contact interface.
- The modeling of contact pressure and friction require fewer assumptions compared with the classic models.
- The identification method only engages the measured local displacements as the original data during optimization.
- An alternating optimization method is proposed to simplify and stabilize the identification procedure.

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