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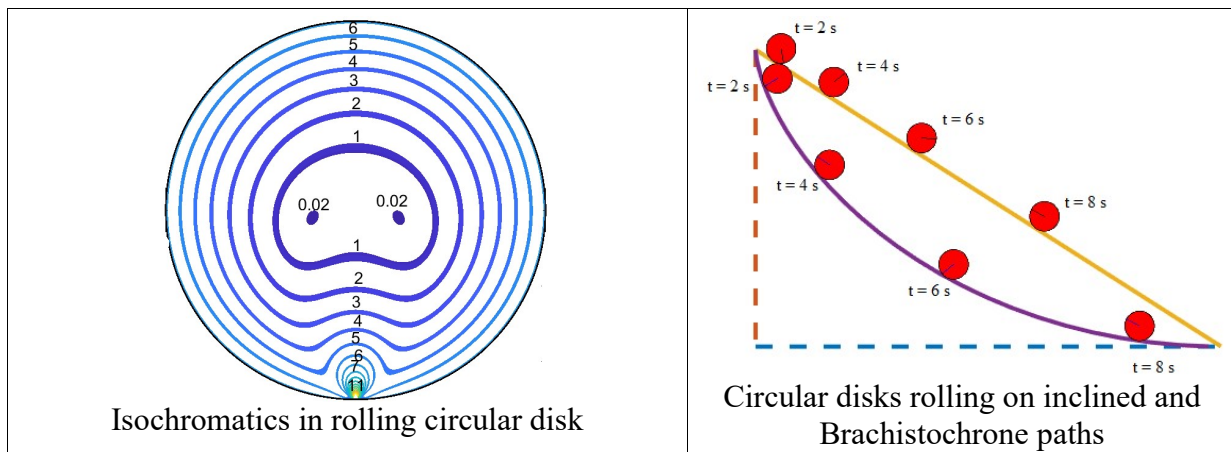


Research Interests:

- Elasticity & fracture mechanics
- Impact mechanics

Brief Summary of Research:

Two dimensional stress analysis of circular disk rolling on various paths in vertical plane due to gravity are interested to design mechanically various sports and recreational industrial components including *roller coaster* and *skate board vert*. Initially, disk (a) standing still on the ground under gravity (b) spinning (c) rolling on horizontal plane are solved for stress distributions as component solutions. Final loading situation is achieved by superposing the component stress distributions, which should be helpful for design and fatigue analysis of disk-like rolling parts in afore-mentioned applications.



Projects:

- None

Recent Publications:

- KVN Surendra and Aditya Pratap Singh. Stress intensity factor of spinning center-cracked Brazilian disk, Indian Conference on Applied Mechanics (INCAM), July 2017.
- Rohit Kumar and KVN Surendra. Finite Element Stress Analysis of simplified 2-D model of Automobile Wheel, NAFEMS India Regional Conference on Engineering Modelling, Analysis, Simulation and 3D-Printing, June 2018.