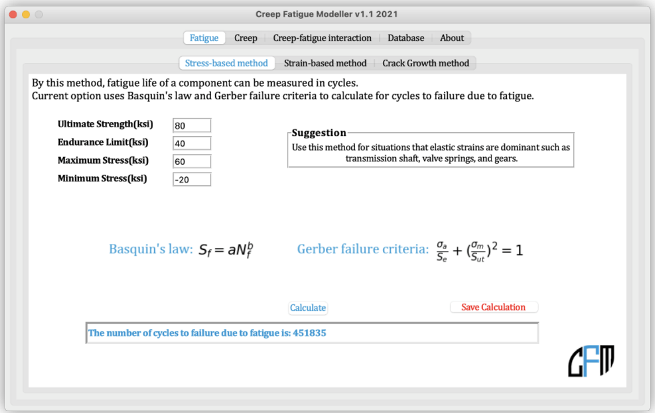
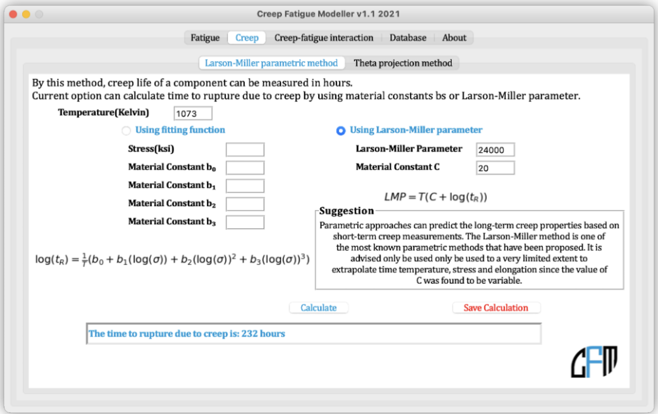
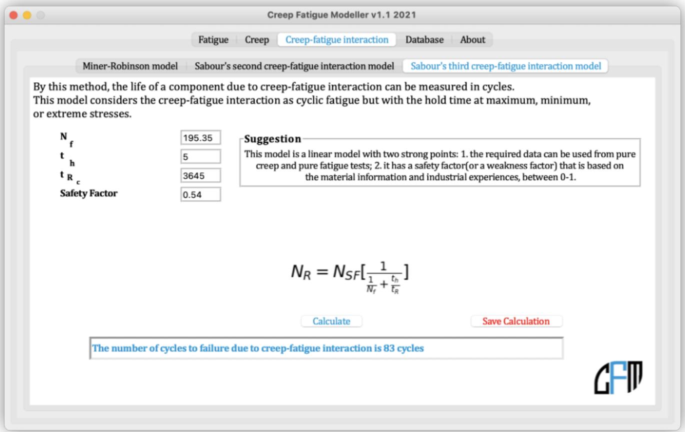
Creep-Fatigue Modeler

A Desktop Software and Web Application Developed for Estimating Creep, Fatigue and Creep-Fatigue Interaction Lifetime

Creep-Fatigue Modeler, CFM in short, is a software for engineering data analysis with a concentration on fatigue, creep, and creep-fatigue interaction. CFM has been developed as a program to cover commercial CAA gaps in estimating fatigue lifetime, creep time to rupture, and creep-fatigue interaction lifetime estimation.



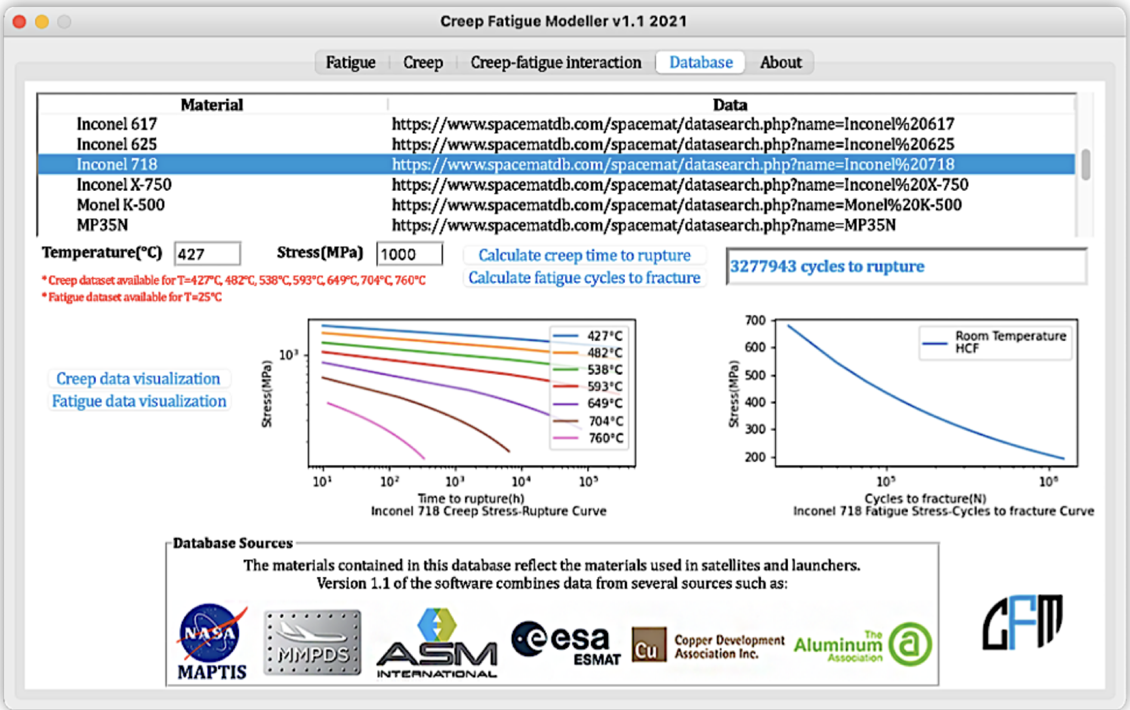




Creep-Fatigue Modeler V1.1, Desktop Software

Version 1.1 of CFM software can estimate fatigue lifetime, creep time to rupture, and creep-fatigue interaction lifetime with several known models, such as Stress-based, Strain-based, and Crack Growth methods for fatigue; Larson-Miller parametric and Theta Projection methods for creep; Miner-Robinson and Sabour's models for creep-fatigue interactions.

CFM V1.1 has been developed using only Python, and it has a built-in creep and fatigue material database for heat-resistant metals. The Software is tested and verified for different materials, although it was first developed specifically for spacecraft's metallic superalloy structures.

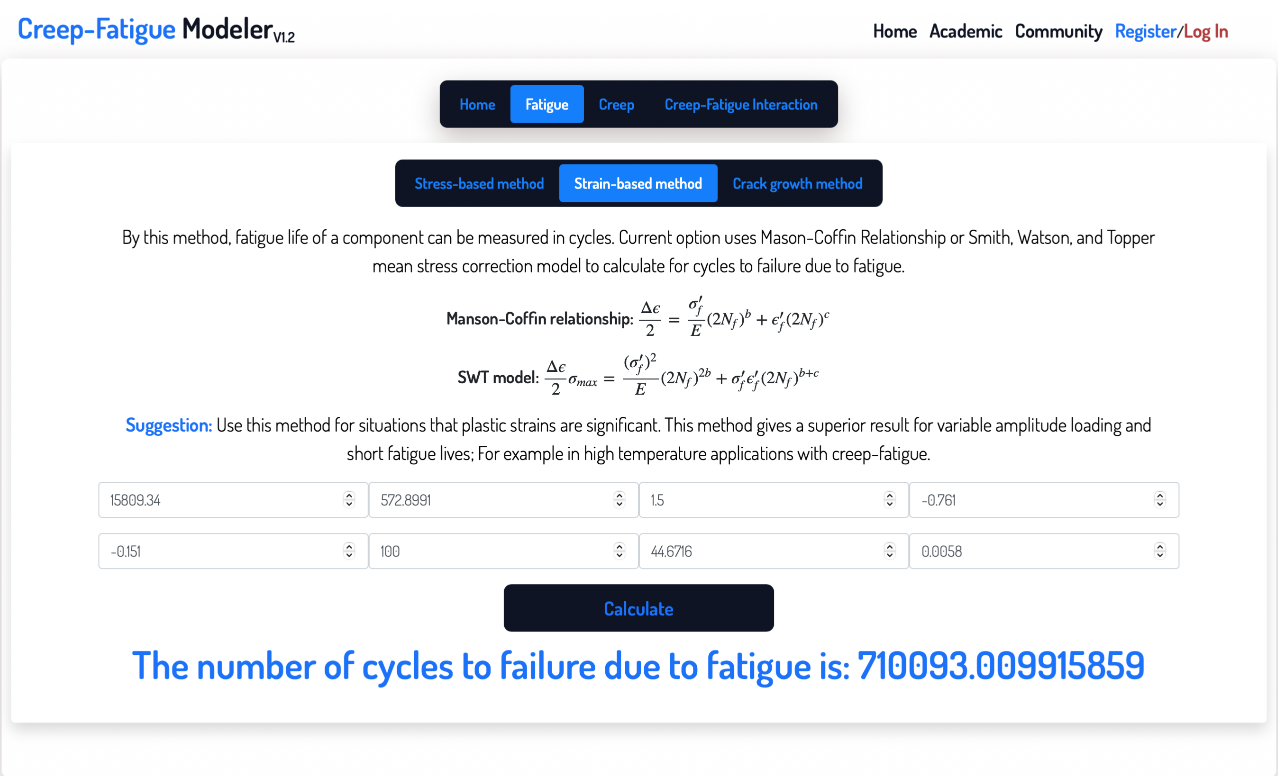


Creep-Fatigue Modeler V1.1, Heat Resistant Materias' Database

CFM can be customized to limit access, and it is a secure place for your tests data and computations...

Contact contact@mojtabamoradli.ir to learn more about how CFM software can be used or tailored to solve your engineering problems.

Click or Scan to Watch V1.1 Demo on Youtube



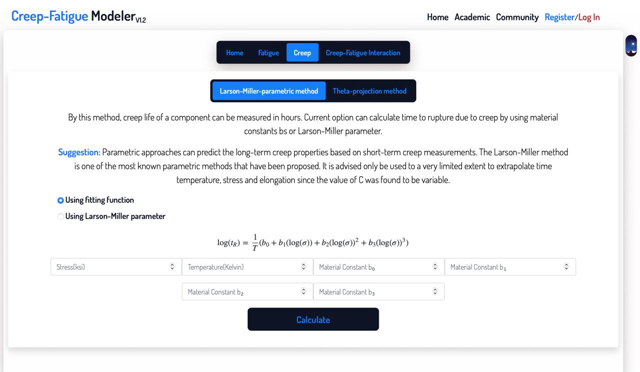
Creep-Fatigue Modeler V1.2, Web Application

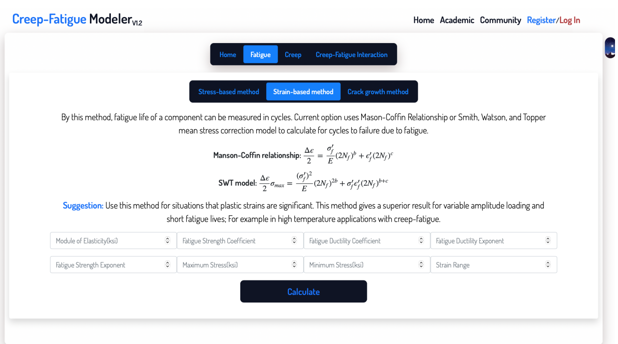
CFM version 1.2 is a web application with functionality similar to CFM V1.1 desktop software, developed using JavaScript and PHP in the back-end and several different programming languages and frameworks in the front-end.

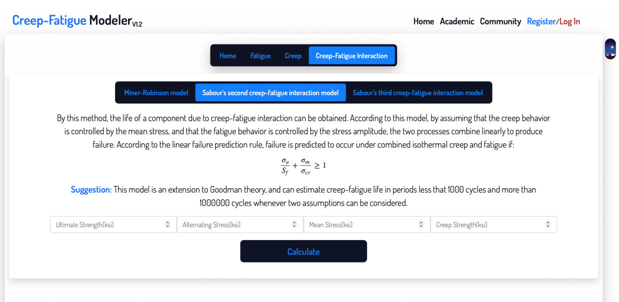
The new version has something more to offer on some fronts and lacks some features like the material database.

The future goal for CFM is to become able to perform creep, fatigue, and creep-fatigue interaction lifetime estimation with the use of even more existing mathematical models.

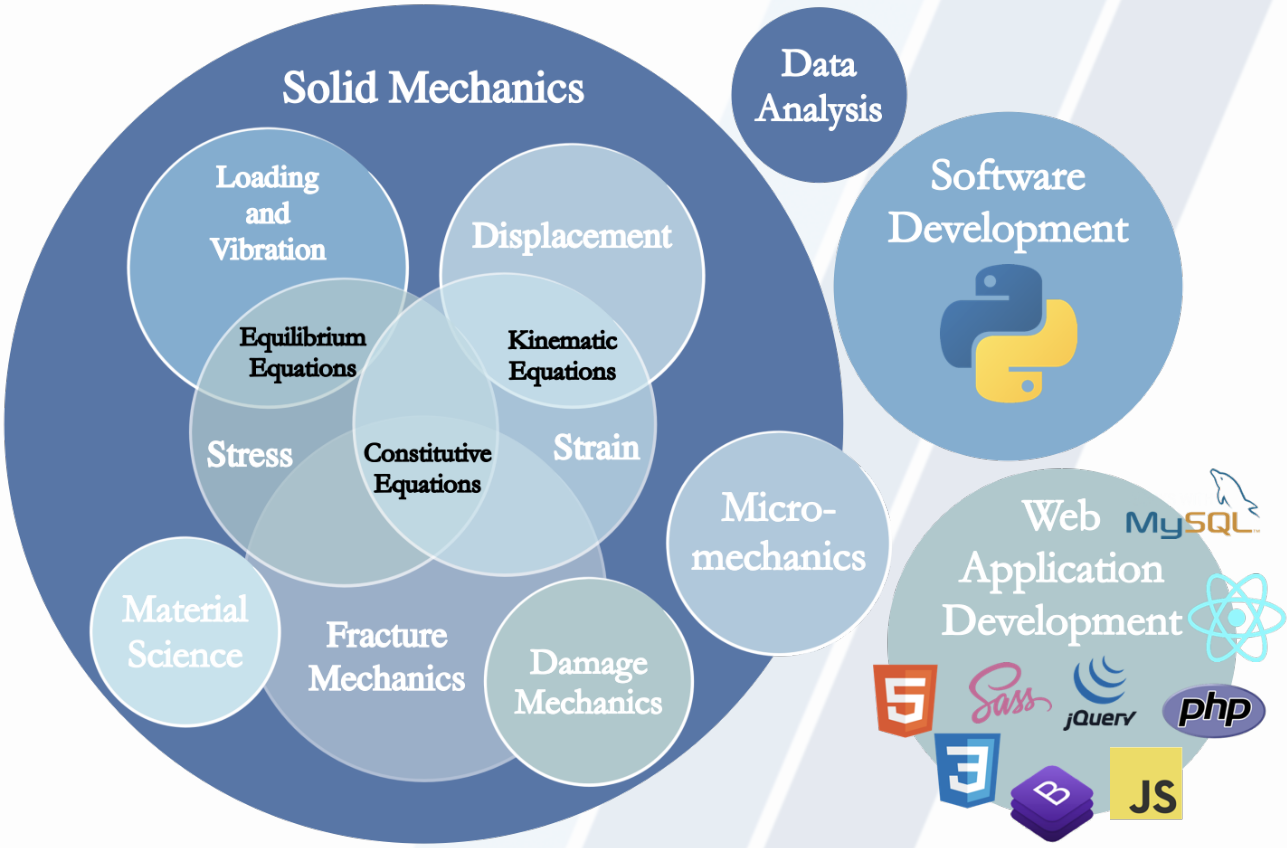
Click or Scan to Watch V1.2 Demo on Youtube







The Multidisciplinary Scope of Work



Developed By

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mojtabamoradli.ir/projects/cfm