



## ***Rocstar* User Tutorial**

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## 1 Introduction

This tutorial provides a quick introduction with examples on how to set up and run existing problems with the *Rocstar* multiphysics simulation application. This guide assumes you have already unpacked, built, and performed the quick tests of the *Rocstar* application as outlined in the *Rocstar QuickStart Guide* included in the *Rocstar* distribution.

The remainder of this guide is arranged as follows. A brief overview of dataset preparation will be covered in [Section 2](#). A discussion about running *Rocstar* in general will be given in [Section 3](#). *Rocstar* I/O will be discussed in [Section 4](#), and visualization of *Rocstar* simulation data will be covered in [Section 5](#). Several examples using existing datasets will be given in [Section 6](#). It is important to follow the examples in order since they are presented with a decreasing level of detail.



## **2    Preparing datasets for *Rocstar***

## **3    Running *Rocstar***

## **4    *Rocstar* I/O**

## **5    *Rocstar* visualization**

## **6    *Rocstar* Examples**

### **6.1    Attitude Control Motor with *Rocflo***

### **6.2    Attitude Control Motor with *Rocflu***

### **6.3    Elastic Piston**

### **6.4    Superseismic Shock**

### **6.5    Shock Panel**