**Computer code should provide the following information:**

**1.** A readme.txt file (or equivalent) providing the name of the program, the title of the manuscript along with the author details. This will assist in correctly assigning the program code and associated files to the correct submission. **Name of the program:** THEPORE

**Title of the manuscript:** THEPORE: A software package for modeling THErmo-PORo-Elastic displacements

**Author details:** Gilda Currenti, Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Catania

**2. A user manual or instruction guide that provides information on how to use the program.**We have provided a user manual.

**3. The source code for any programs that have been written.**

We have provided the source code.

**4. Test data that can be used to assure that the program is working correctly. Test data should not be overly large so that there are problems downloading the program code and data.  
(a)** Test data for the forward analysis were provided in the Table 1 of the manuscript. **(b)** Another test was provided for the oblate ellipsoid by choosing the parameters set as in the provided code: process=0, SourceType=3, a=500, b=300, depth=-123, eps\_0=0.003, alpha=125, delta=80, gamma=5. **(c)** A text file data.txt containing station coordinates and deformation data is provided to test the inversion procedure. The file was prepared with the forward model. We tested for the spherical source (SourceType=1) by choosing process=1, MaxGenerations=25, PopulationSize=100, n=200, Xc=[494516 498516]', Yc=[4248788 4252788]' and Zc=[-1500 -100]'.

**5. Output files should also be provided that will allow a user to check if a compiled program is working properly.**

**(a)** We provide a **Test\_data1.fig** file for viewing the results. A file **Def.mph** for the rectangular prism has been provided to verify the results in COMSOL. **(b)** The results of the performed test are present in the figures **Source\_Test\_2.fig** and **Displacement\_Test\_2.fig**. **(c)** We provide the output text file parameters.txt, and the figures **Optimal\_Displacement\_Test\_3.fig** and **Marginal\_Distributions\_Test\_3.fig**.

**6. All files should be compressed into .zip or .gz format, which will then be placed on the Computers& Geosciences FTP site for download once the manuscript has been accepted and published.**

The MATLAB files have been compressed into .zip format.