

## MatTaup: A TauP toolkit for MATLAB

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### Introduction

[TauP](#) is a Java based seismic travel time calculator, which is developed and maintained by H. Philip Crotwell at the University of South Carolina. MatTaup is a TauP toolkit for MATLAB users, and it is actually a set of interface programs that call TauP functions for travel time calculation. MatTaup contains several MATLAB functions and Java classes that make MATLAB functions communicate with TauP. Currently only the following five tools in TauP are implemented:

TauP Command	MATLAB command	Description
taup	taup	a GUI that incorporates the time, pierce and path tools.
taup_time	taupTime	calculates travel times
taup_path	taupPath	calculates ray paths, depth versus epicentral distance.
taup_pierce	taupPierce	calculates pierce points at model discontinuities and specified depths
taup_curve	taupCurve	calculates travel time curves, time versus epicentral distance.

Running MatTaup requires MATLAB version 6.0 (R12) or above.

### Download and Installation

MatTaup is free to download and use under the terms of [Gnu Public License](#).

Download from [here](#) (ZIP file, ~2MB).

To install MatTaup, you first need to uncompress the zip file into a directory where you wish MatTaup to be installed. Then you need to add directory "matTaup" into MATLAB search paths, and add the Java archive file "matTaup\lib\matTaup.jar" into MATLAB Java class paths by modifying "classpath.txt". After you restart MATLAB, MatTaup is ready to use. Use MATLAB help command for usages.

MatTaup is already included in [FMI](#) (FISSURES-MATLAB Interface). You do not need to install MatTaup if you have installed FMI.

### Contact

MatTaup is written and maintained by Qin Li at the University of Washington. Please send any question, comment or bug report to [qinli@u.washington.edu](mailto:qinli@u.washington.edu)

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