

## About Ramanujan

This song is a biographical rock epic about the life of Ramanujan, who is widely considered to be one of the most brilliant mathematicians who ever lived.

I am a strong believer in the value of musical collaboration on the Internet. For this reason, I am releasing Ramanujan under a Creative Commons Attribution-ShareAlike license. My hope is that you will find new and interesting ways to improve, modify, re-record, or remix this song.

To make it even easier to reuse the song, I am providing you with everything you need.

For singers, I've made it particularly easy to replace my vocals with yours. If you'd like to redo *all* the vocals, you can simply add your vocals to "Ramanujan No Vocals". Or if you'd like to just redo the lead vocals, you can use "Ramanujan No Lead Vocals" which retains some of the background choral harmonies.

To make other alterations to the mix, there are two avenues. If you own Mackie's Tracktion software, you can download the entire Tracktion archive for this song. All the tracks are included, and the edit only requires the built-in plug-ins and a couple others that are available for free on the Internet (Anwida DX Reverb Light and Kjaerhus Classic EQ).

If you don't have Tracktion, you can use your own favorite multitrack audio software, or download the free Audacity multitrack software from the Internet. Then, you'll want to download "Ramanujan Individual Mixing Tracks.zip" and optionally "Ramanujan Individual Source Tracks.zip". The first zip file contains all the tracks you'll need to duplicate my mix. Just import these 11 files into your software and you're ready to go. However, some of these files already have some processing applied, and in some cases, instruments are already combined. For example, the "Drum Mix" track in the Mixing Tracks zip file contains rock drums, ethnic drums, and hand percussion all mixed together and processed into one track. If you want to access any of the individual source files, you'll need the supplementary "Ramanujan Individual Source Tracks.zip" file. This will give you the raw, unprocessed tracks, and even the original MIDI file I used to generate a lot of the instrumental audio.

It is worth noting, however, that the MIDI file is not designed to be played back with a General MIDI sound file. I used it with my Kurzweil K2000 sound module. So unless you have a K2000, with the same ROM blocks and 3<sup>rd</sup> party sounds that I have, it is unlikely that you will be able to use the MIDI file to recreate my performance. However, if you are looking to replace some of my Kurzweil sounds with better sounds, or if you just want to look at the notes to figure out what chords I'm using, the MIDI might be a valuable reference tool.

With all this at your disposal, you have complete freedom to take this material in new directions. You can change the lyrics, replace vocals, replace instruments, or practice your mixing skills by changing the balance of what's already there. You can take just an interesting guitar riff, the background vocals, or the drum beats, and remix them with other content. Use the material as a background for a video, or create a stepmania dance track.

The Creative Commons Attribution-ShareAlike license just means that you should mention my name if you reuse the material, and your derivative work should also be licensed in the same ShareAlike manner, so that others can continue to build off of the value that you have added.

And if you come up with any clever and interesting uses for my song, I'd love to hear it. Feel free to drop me a note at [mark.engelberg@gmail.com](mailto:mark.engelberg@gmail.com).

## **Credits**

Words and Music by Mark Engelberg

Performed by Mark Engelberg

Acoustic and Electric Guitar played by Mindy Engelberg

Additional Vocals by Mindy Engelberg