

# A chaos and order love story

Sergio CT - November 2020



It was a random day in 2008, nothing interesting was going on, so I started reading science articles, till I found one about Fractal Geometry. Soon I realised I could experiment all that by myself, as I had some notions on maths and programming, so I did not think twice and got to it.

This is how my application was born, which after changing several times its name, ended up being called FFExplorer. At the time it was just an experiment to try and understand the Fractal Geometry, but in a world full of possibilities, I couldn't stop. As Isaac Asimov said:

*« I believe that scientific knowledge has fractal properties, that no matter how much we learn, whatever is left, however small it may seem, is just as infinitely complex as the whole was to start with. That, I think, is the secret of the Universe. »*

My first resources for knowledge on the matter were Wikipedia and some papers in old graphic computing magazines that I downloaded from the Internet, where I got ideas and tried to develop them. I had to 'invent the wheel' on many occasions and nothing ended in my application if I didn't understand how it worked.

A couple of years later, my app offered so many exploring possibilities that it would have been a pity to put it in a drawer, so I decided to improve its interface and share it. I started by hosting it on different software platforms, but that wasn't a good experience because they packaged it in installers that tried to deceive the user in order to install other apps additionally, or they were bombarded with advertising. That is why I ended up creating my own website, free of nuisances for its visitors.

At that moment, with my own website, I was free to explain the app's internal algorithms, and that is how a bigger project began to take shape with a new aspect: educational.

One of the first people to get interested, and who has been by my side until today, is ElenSegu, who has not stopped to amaze me with some of the application's results that I hadn't even dreamed of. A little bit later, Ranvaig and Julofi joined her, both with results as amazing, as well as a lot of other users, which I do not have the pleasure to meet, but which works I follow in the net.

It was in this stage where I had my first technical encounter. I was dealing with the inclusion of my web in one of those old web directories, when I found another Spaniard developer's web. The app was called FractalTime and was developed by Daniel Derlinchán as his final master project for uni. I tried his app and wrote him about some of its functions and he did not take long in answering with the details.

Over the following years my library got more and more Fractal Geometry books. I improved and improved my app from what I learned in those books and I added some new algorithms to the website.

Time flew by and I verified that most people who contacted me in the web came from education (Fractal Geometry is a neglected subject in Spain). At that moment I saw the need to give a different approach to the project. I redesigned the website from scratch, taking away all the technical information, giving it a more professional aspect and focusing it on the world of education. But behind that new image, the project is true to its original philosophy, informational and free, keeping on advising teachers and students that wish to work with Fractal Geometry.

It was then, with the change of focus, when I started to get more and more job opportunities as Fractal Geometry teacher in educational enrichment for gifted children, for what I had to graduate as “Developing intelligence, high capacities and neuropsychology expert”. And, even if I withstood it for a long time, I had to get into the social media, in order to keep in touch with all the teachers and students that I met every year.

Currently, I’m participating in social media commenting on Fractal Geometry’s specialised groups. Loads of Good ideas happen there and they are an opportunity to show off my students’ projects, making mathematicians like Santi García Cremades see and share their Works and making my students excited when they see their effort rewarded by well-known mathematicians.

And this is how FractalFun and FFEplorer have evolved till nowadays. Apart from the mentioned people, I have to thank Íñigo Quilez for his help with some orbit traps shapes, Paul Derbyshire, for his advice on Nova’s algorithms development, Felipe Riquelme for his collaboration with Riemann spheres, to all the people who have been in charge of translating the software and manuals into different languages and to Luz Pérez-Sánchez and Pilar Muñoz Deleito for believing in me as a Fractal Geometry teacher.

I want to thank my family for their help, and for the lost time while I’ve been working on this Project.

To all who have believed in me: thank you!

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