



portrait: Frank Wojciechowski

Boris Russ

Chemical Engineering
Undergraduate class of 2006

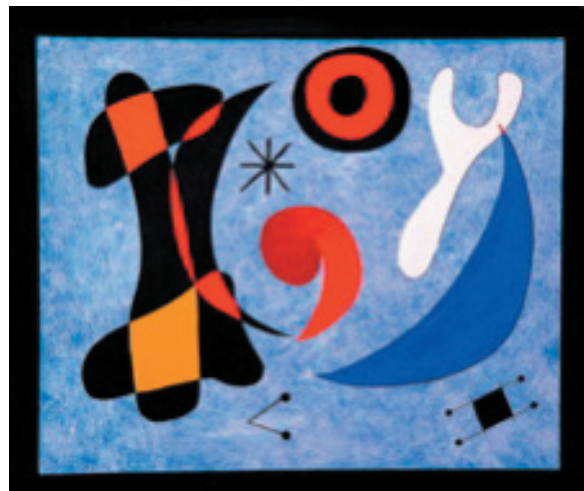
I am an artist. Drawing and painting were a big part of my life in high school and I wanted to continue this experience at Princeton.

I paint because I love it. For me, it is a source of inspiration and an outlet for frustration from the stresses of a rigorous academic schedule. Especially as an engineer, I think that it is crucial to have something that balances studying the sciences, and painting does that for me. Painting is a magical world, boundless in its possibilities, that bridges liberal arts with the sciences. Through colors, textures, and lines, I can bring my thoughts to life. When I paint, I get a rush of adrenaline that powers my day. It is something I hope to continue doing throughout the rest of my life.

SEAS work is teeming with art. I have always looked at things in terms of their structure and beauty in color. Especially after focusing on abstract art this semester, many things have caught my attention in science classes from an artistic perspective. The random coil structures of polymers reminded me of modern line paintings. Industrial plant designs are artistic in their technological manifestation. The most fascinating art in its natural state that I have seen in the sciences was while doing laboratory experiments in my materials lab course, MSE 302. Looking at structures under a microscope was absolutely amazing. Steel seen in a scanning electron microscope, on a micrometer scale, is abstract beauty at its best, while our examination of cell adhesion to polymer surfaces under an optical microscope displayed a stunning color collage of reds and greens. These are just several of the infinite cases in which art is integrated into engineering. Understanding the fundamental properties of polymers and other chemical compounds that themselves play a key role in painting has given me a new appreciation and respect for texture and color theory, while the study of chemical processes has ignited my interest in systems, which has carried over onto the canvas.

Sergio Verdu

Electrical Engineering
Professor and (very) occasional dabbler
in acrylic painting



Shannon-Miro' by Sergio Verdu:

This uses Joan Miro's language to represent a common mathematical symbol used in Shannon's information theory called Mutual Information. It serves as a puzzle to challenge my information-theorist friends.



Interrogatory by Sergio Verdu:

This is painted on a collage of excerpts of my papers from the IEEE Transactions on Information Theory. Although not visible in this photo, various formulas are discernible upon close observation.