



An interview with Barbara Drossel

Barbara Drossel is a Professor of Theoretical Physics in the Institute of Solid State Physics at the Darmstadt University of Technology, and has been a member of CiS for 8 years.

What have you been doing until now?

I studied physics in Munich. After obtaining my PhD, I spent two years at MIT, three years in Manchester, and two years in Tel Aviv. Four years ago I obtained a full professorship in Darmstadt (near Frankfurt). My research field is statistical physics and complex systems.

What do you do for fun?

I like reading, playing the piano, unicycling and singing.

Who have been the most important role models in your life?

My parents and other Christian couples have been a role model for how to live a good marriage. There are a couple of scientists who impressed me by their way of doing science and taking care of their students. Unfortunately, there is no female Christian scientist I could have learned from....

How has your faith helped you as a scientist, or vice versa?

My faith guided me to look for indeterminism and causal openness in nature and to expect more sophisticated mechanisms (and not just copying errors or radiation damage) as the source of new genetic information in evolution. Science provides me with many reasons to admire the Creator.

What challenges have you come across as a Christian and a scientist?

Dealing with scientists who think that Christianity is irrational, and with Christians who think that much of modern science is wrong. Dealing with the widespread misunderstanding in both groups that scientific and theological explanations are mutually exclusive.

What science-faith books have you most enjoyed/found most helpful?

I got a lot of useful information from "Reason, science and faith" by Forster and Marston, and I was fascinated by "Science and Christian Belief" by John Polkinghorne.

How did you get involved in CiS?

When I lived in Manchester, I got to know Christian scientists who were members of CiS. As this was exactly what I was looking for, I became a member.

A few years ago you wrote an influential review entitled "Biological evolution and statistical physics", *Advances in Physics* 50, 209-295 (2001), which started with a long quote from Genesis 1, and then a comment about how Christians and Jews had accepted evolutionary thought. That is an unusual way to start a scientific paper. Why did you do this, and what has been the reaction of your colleagues?

During my time in the USA, I learned that many scientists equate Christianity with Young-Earth-Creationism, and I wanted to let them know that for me and many other believers there is no contradiction between science and faith. Until now, I have had no response at all to these first sentences of my article...

On your website you say about your husband: "I met him at church. We do not want to live separated, therefore we toured the world together." How did that work out?

When I finished my PhD, several people suggested an academic career to me. My husband decided to support this idea, also because he was at a dead end in his profession at that time. *(contd. on page 2)*

He is an engineer in telecommunications and obtained additional qualifications in computer networking while we lived abroad. We only went to big cities, so that he could find work in all those places, and he also found a job soon after we returned to Germany. He believes that God has given me (or, as he would say: to us as couple) the talent in physics in order to develop and use it. There are certainly not many men who love their wives in this way. He is indeed a great gift of the Lord to me...

On your website http://www.fkp.physik.tu-darmstadt.de/drossel/barbara_drossel/ you have an extensive personal section, where you talk about your family, your hobbies, and the fact that you enjoy reading biographies of Christians because "they are very inspiring and to me one of the best proofs of the truth of Christianity." Have you had any good reactions to this?

Sometimes I get emails from Christians who are encouraged by reading my website. Rarely I receive emails from nonbelievers who challenge me with questions.

Finally, can you tell us about Science/Faith in Germany? Is there any help for Christians working in Science. How does the church react to science?

In Germany, we have everything from young-earth creationism to theistic evolution, and we have all kinds of attitudes towards science/faith in churches. In general, I perceive an openness to learning from experts in this topic, including evangelical churches. Sometimes I am invited to give a talk on science and faith in a church. However, the way that the most widely read weekly evangelical news magazine reports on scientific topics such as the Big Bang or Evolution shows me the great need for education in science/faith issues. I know about two science/faith organisations in Germany; one of them rejects macroevolution, the other one is relatively close in spirit to CiS, even though I must admit that I do not yet know them very well. As far as I can see, for the majority of Christian scientists faith and science are two separate parts of their life that coexist peacefully without the need for discussion. My impression is that there are in Germany more physics professors than theology professors who believe in the Virgin Birth of Jesus (I don't know about biology professors...).