TALKS WITH
DR. ROLF RABENSEIFNER

HPC TRAINING

When did you first start giving training, and why were you triggered to do this?

I gave my first course in January 1998 on the innovations in MPI-2. My boss, Michael Resch, had suggested that I become a member of the MPI Forum and I was excited about the opportunity to take over his MPI courses.

How do you see the added value of training courses? What is the benefit for the trainee? Is there also a benefit for the trainer?

Our participants are usually scientists in a specialised discipline, often in the natural sciences and engineering. Through such training courses, participants can be taken from 0 to 100 in a very short time, e.g. in programming for HPC systems. Of course, the trainers also learn from the participants' questions and feedback, especially considering their various backgrounds.

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>
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When you give training, what do you want people to get out of it in terms of skillset?

This I don't want to show them just a default solution. I try to teach them the diversity of methods so that they get the know-how to decide for themselves which specific methods are most suitable for their project. Therefore, it is important to deepen all learning contents also through exercises. This is the only way to ensure that the various methods can be quickly recalled when considered at home.

Your "train the trainer" program is like a quality label which is also useful with respect to funding agencies. What gave you the idea to start the program?

Oh, I never thought of it as a seal of quality. I just wanted to give back something that I had given myself. I started with the MPI-1 course from the EPCC in Scotland.
They provided the perfect course for everyone. And I then added MPI-2, MPI-3, and MPI-4 over the years.

Unfortunately, I had to experience that participants came to me who had already been taught MPI elsewhere but had not even learned the concept of nonblocking interfaces. This is central to MPI and was already included in the EPPC's MPI-1 course! The ability to teach this had been partially lost again.

And of the PTCs, the PRACE Training Centres in Europe, I observed that many of them tried to buy courses instead of developing trainers and trainings themselves. But you can't just duplicate trainers.

So, I thought it would be nice to not only pass on the knowledge to future trainers in other countries via this "Train the Trainer" program but also give them the tools, i.e., the often animated slides as original ppt and not just as PDF. I also wanted to dampen the jump into the deep end by having them once or twice volunteer when the course is given and learning how to adequately support the participants during the exercises. At the same time, it ensures that future trainers also have a firm grasp of the content.

It seems perfect that training capacities can be *cloned*. But we should not overlook the fact that excellent training in HPC must always be based on own research in this area. As I mentioned in our last talk, it is precisely this mix of research and services such as training that our HPC centres should always demand.

If you could give some advice to trainers, what would that be?

All the trainers I know have different careers, so it's hard to give general advice. What they all have in common is the joy of teaching, the joy of precisely understanding the content, and they are all internationally active. It is not advisable to teach only at your own centre. Too few courses are not efficient, and teaching improves through frequent repetition and subsequent feedback.

Unfortunately, it must also be said that giving advanced training for PhD students is not really rewarded on the way to a professorship. Therefore, if you want to follow this route, it is important to apply for a permanent position as early as possible, and these are usually only available at the large HPC centres. And to the funders and centres, I am indirectly advising to create these structural opportunities.

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We were told you sing in a choir in our free time. Do you also have some advice for trainers regarding vocal techniques to spare their voice or use their voice in the most optimal way?

Actually, no advice as I'm lucky enough to have it in my genes to be able to talk out loud for five days without a microphone. :-)
But I know of colleagues who deliberately went to a voice coach or opera trainer at the beginning of their career.

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For me it was very inspiring to see the dedication and implication of Rolf in all possible organizational aspects of the course, providing the best learning experience for each participant. His thoroughness and precision in the explanations during the courses and the care in the curation and amendment of materials are really remarkable.

Dr. Carlos Teijeiro Barjas, Advisor Supercomputing of SURF, the collaborative organisation for IT in Dutch education and research

IMAGE CAPTION
1. Dr. Rolf Rabenseifner at the colloquium organised by HLRS in his honour in May 2022
2. Dr. Rolf Rabenseifner

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