

Welcome Address

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Welcome to the Porous Media Laboratory – PoreLab – inaugural workshop. We will spend three days now exchanging ideas having one common theme: porous media.

But why are you here, what is PoreLab? PoreLab is a Center of Excellence funded by the Norwegian Research Council. Forty percent is located in Oslo and sixty percent in Trondheim. We are five principal investigators that will for the next ten years work together to run this center. We have in Norway a huge petroleum industry that has amassed a vast pool of knowledge on porous media. Our idea is to channel this knowledge into other fields where porous media are central – fuel cells being one example – rather than having this knowledge dissipate into nothing when that industry rides off into the sunset sometime in the not distant future.

PoreLab is based on the key word interdisciplinarity. So, let me now for almost all of the rest of my allotted time present you with some reflections on what is interdisciplinarity.

The idea behind PoreLab is to bring together experts with a diverse background to concentrate on a well-defined set of problems. This is interdisciplinarity: people with different backgrounds coming together to solve a specific problem. Think of the opposite: a group of people with the same tool that wishes to solve problems using it in many different disciplines. An example is complexity scientists applying their methods to sociology to biology to geology. This is not interdisciplinarity, this is “if what you have is a hammer, then everything looks like a nail.”

We achieved true interdisciplinarity this last Monday. We organized a discussion where among others a representative from the Municipality of Linköping in Sweden flew in to join theoretical physicist and principal investigator Dick Bedeaux in considering a problem in connection with storing excess heat when burning waste. Dick is a representative of the great Dutch school in statistical mechanics with a direct line back to the legendary Paul Ehrenfest. Now, for such a discussion to work, those present must form an overlapping patchwork of knowledge so that ideas may flow back and forth without hitting walls.

I am very, very, very busy these days in setting up PoreLab. So, I had a meeting with Dean Øyvind Gregersen and our department head Erik Wahlström among others *inside* the meeting on excess heat in connection with waste management. After this embedded meeting was over, I told Erik that I had to return to the other meeting with the Linköping municipality representative. The reaction was “WHAT!?!” That was what I was expecting (and hoping for): we are really doing something new.

Interdisciplinarity is hailed as something important. Only this Monday – the same Monday – our Rector had an op-ed in our local newspaper entitled “Interdisciplinary Melting Pot” in which he explained the direction in which he wants to take our university.

Now, actually creating an interdisciplinary environment is not easy. The problem is, and this is universal: our universities are not set up for this by the way they are structured. And this is what others have found out: the key to succeed in creating an interdisciplinary center is that one creates a center which is

physically located in one place and away from their respective departments. The winner of last year's Abel prize in mathematics (I think it was) said that the most important work place for him was next to the copying machine as there he would meet people with all sorts of tools and backgrounds.

But, there is an additional aspect to interdisciplinarity that is easy to miss: there must be a coupling back to the mother departments. The respective communities must get to share the knowledge generated in the center- The interdisciplinarity must enrich the disciplines that are involved. So, even though there is a physical center, there must also be clear couplings to the departments. Double offices? It is not clear how exactly this is to be solved.

We hope to enrich you too, our collaborators from near and far. We wish to make our center into a place where you not only meet us, but also other visitors; a place where we can have fun developing our science. I extend a standing and perpetual invitation to all of you: come as often as you like. We can fund this now (thanks, NRF!) and we will!

A propos having fun: there is nothing wrong in having fun while doing real research. The greatest artworks are steeped in emotion and fun is an emotion.

But, we also have a great responsibility. Here is how I see it: after ten years, I need to be able to look 250 average taxpayers in the eyes and tell them "What we did was worth every penny you have paid in taxes for the last ten years." My aim is to be able to look them in the eyes with pride.

Have fun!