Changing the Way Researchers Communicate – Interview with ResearchGate Founder Ijad Madisch

ResearchGate was founded in 2008 to support scientific collaboration and grew rapidly. Today it has more than 7 million members according to its website. The platform offers ways to share published and unpublished data, participate in open-review, and ask and answer questions.
To put ResearchGate simply as a social networking site, for researchers and others involved in the pursuit of independent research, would be an understatement. Not only has it enabled researchers connect across economic and cultural barriers and work towards a collaborative and global realm of sharing knowledge from Stockholm to Santiago and from Hokkaido to Hawaii but also enabled the labs in developing nations to get access to surplus equipment which would otherwise be an impediment to cutting-edge research for so many talented individuals.
We talked to Dr. Ijad Madisch, co-founder of ResearchGate and asked him about his motivations, the challenges he had to face and prominent examples of how ResearchGate influenced the scientific landscape.

JUnQ: Dr. Madisch, you founded ResearchGate in 2008 with two of your colleagues. What were your intentions going into this project and did you imagine that it would be as successful as it is today?

Madisch: I was still working as a researcher in 2008 and had repeatedly run into problems I couldn't find solutions to on my own. My colleagues couldn't help me and I couldn't find anyone online either. That's when I had the idea for ResearchGate. The intention I had back then is still the same today: we want to connect the world of science and make research open for all. Of course I didn't know that we would be seven million members strong seven years later, but I knew that we were on to something with ResearchGate that was desperately needed.

JUnQ: A popular anecdote about your attempts in starting the network is that your idea had been called "Firlefanz" (non-sense) by a professor in the beginning. Were there times you had doubts your project would succeed? What problems have been the most challenging ones?

Madisch: We faced opposition on all fronts. It came from my professor who said my idea was "Firlefanz" when I asked him if I could work less to devote more time to ResearchGate, and from many other people. But I never doubted my idea and didn't think about giving up. On the contrary, I still feel that you're on the right track when people challenge you. It shows that you're changing things.

JUnQ: ResearchGate is often called "Facebook for researchers". Do you think that is an accurate description?

Madisch: I don't think "Facebook for researchers" is an accurate description for what we do. Facebook is all about fostering existent connections. ResearchGate is about making the right connections between researchers and their research.

JUnQ: With ResearchGate being "for scientists" the network somehow excludes non-scientists. Is there some direct relevance of ResearchGate for the "general" public and what is it to your opinion?

Madisch: ResearchGate makes research accessible for the general public and it has relevance because the work researchers do on the network has impact on people's lives and livelihoods.
Even though only researchers (with an accredited email address or in an individual process) can sign up to the network, everything they make public on the network is accessible to anyone. In adherence to the idea of Open Science (like open source, just for science) you don't need to be signed up to read.
And there's more and more to read: in the first four years of ResearchGate members uploaded two million publications to their profiles in total. Now they upload two million publications every month.
There are also examples from almost any field where researchers' work on the network has changed the lives of others. There's the biologist who helps farmers raise fish in the Brazilian savannah – in pools filled with wastewater from desalination systems. She reached out on the network to learn from peers in countries that have more experience with desalination, like Australia and Israel, and learned from them.
In another case a Serbian traffic engineer worked together with other researchers worldwide to hear how they made their public transportation infrastructure accessible for everyone in their countries. Now he's presenting his learnings to relevant agencies and companies to make sure that everyone, no matter their age and abilities, can get from A to

B in Serbia, too.

JUnQ: You were quoted with "the way we discover knowledge is so broken" what do you mean by this?

Madisch: I say that knowledge discovery in science is broken because it is. Our publishing system comes from another, pre-web era. It's broken in a way that it doesn't fit our needs today.
I turn to the open source movement in information technology for a solution. Here engineers make their code public for others to work on and advance it. I imagine a similar, more iterative, work process in science.
Very often we don't need to stick to the "abstract, introduction, methods, results, discussion, conclusion" cookie-cutter approach to scientific articles. The most important part of a study may simply be a graph or a figure. Why not publish that first?
You still have to put it into context, and this is our strength. On ResearchGate you can connect every bit (literally) of knowledge – and because it's embedded in a network of experts – present it to the people who need to see it.

JUnQ: Last year a big scientific fraud shook the biomedical community when researchers claimed to be able to create stem cells by a simple acid wash. What role did ResearchGate play in the exposure of this fraud and what impact has this scandal had on the platform?

Madisch: Kenneth Lee was the first to publish proof that the experiments didn't work – and he published it on ResearchGate. He tried to replicate the study following the researchers' protocols to turn adult cells into stem cells by washing them in acid step-by-step. He later posted his results on ResearchGate and even live-blogged parts of the process on the network.
This showed that ResearchGate enables transparency and real-time communication in science. Later an independent official investigation confirmed that the study was fraudulent.

JUnQ: You ask users to upload their research in order to make it available to everyone. How do publishers react to seeing the articles being removed from behind their paywalls?

Madisch: Most publishers allow for certain versions of articles to be shared on researchers' private websites, and researchers' profiles on the network are private websites.

JUnQ: As you possibly know, our journal is dedicated to the publication of negative and null results. In which way can ResearchGate contribute to avoid the repetition of experiments that someone else already carried out with a negative result? Can you estimate how big the portion of negative results on your platform is?

Madisch: Researchers ask hundreds of questions and get thousands of answers daily on ResearchGate. It's here that they also share what works and what doesn't, so knowledge that's usually not shared, except in journals like yours. This also applies to datasets. Here we see researchers are sharing more and more. In the beginning they uploaded 100 datasets daily, now they upload 700.
In one case an asthma researcher ran into problems with his samples. They were infected with bacteria that couldn't be easily treated. So he reached out on ResearchGate for advice and got help from other researchers who saved him months of work. This knowledge exchange about something that didn't work out as planned is now documented and easy to find for someone who might run into the same problem in the future.
I don't know what percentage of "negative results" we have on the network. We also want to help researchers let go of the notion that there is such a thing as a "negative result". Researchers can upload anything that pertains to their work to their profiles and show a comprehensive picture of what they do. Most of which, and this I know from experience, ends up being unexpected.

JUnQ: There are several possible ways to be "active" on your platform/network. In your opinion, what is the most important feature of ResearchGate?

Madisch: All products and functions on ResearchGate tie in together and center around researchers sharing their work and getting feedback for it in real-time and discovering research of others. They present their findings on their profile, and products like Open Review and the RG Format help authors get feedback from peers without delay, stats provide quantitative feedback. This immediate feedback helps researchers build reputation from day one. In the end there's no part of the network that would work without the other, so they each play an important role – alone and in context of the bigger picture.

JUnQ: ResearchGate has been criticized for automatically sending e-mails to your co-authors that seem to be written by you personally when you join the network. Did you think about abolishing this automatic function? For what reasons do you keep it up?

Madisch: Our co-author invitations are a very useful feature. They help you to easily keep track of what your co-authors are working on. It's something the vast majority of our members appreciate and so we've never considered abolishing this feature.
However, researchers have full control over who they invite; and recipients have full control over signing up to the network. Besides that, invitations can be switched off by both inviters and recipients at any time.
We take personal data and Anti-SPAM-policies very seriously and therefore have our processes audited on a regular basis. They are compliant with European and U.S. regulations.

JUnQ: How do you feel ResearchGate has changed the communication by and between scientists?

Madisch: One physicist said: "I would compare it to when we first got email, just now we can reach many more people at the same time." This approach to making new professional connections has led to many successful collaborations across all fields.
Recently a team of three researchers from three different countries got together to investigate the strange sleeping behaviors of lemurs on Madagascar. These primates can choose whether they want to be awake during the night or day. The team found that this ability is much older than previously thought and may have even been an evolutionary benefit. The researchers did the study in their free time, and on the network. They never met in person because they didn't have to.

JUnQ: What are your plans for the future of ResearchGate?

Madisch: We're working hard on creating even smarter solutions for our members to easily follow and discover the research they need to see.

JUnQ: Thank you for the interview and good luck in the future.

—David Huesmann