

HOW TO FIND FUNDS

By Sonja Knols

Obtaining grants for research is one of the major challenges computer scientists in the Netherlands face these days. Peter Bosman, Senior Researcher at Centrum Wiskunde & Informatica and Professor of Evolutionary Algorithms at TU Delft, has become well-versed in securing funding from a myriad of different sources. Here he shares some of the lessons he has learnt.

Looking back, Peter Bosman would give his past self the following advice when it comes to finding funds for his research into design and application of evolutionary algorithms: 'In line with my key research subject the simplest summary would be: adapt or die. Get out of your silo, explore the possibilities your research offers to others, and look for motivating collaborations that help you achieve your goals.'

Bigger picture

In the almost twenty years that passed since he obtained his PhD, Bosman has learnt along the way what does and does not work for him. 'When I started my academic career, I focused on writing grant proposals for fundamental research projects alone. Besides the fact that purely fundamental-oriented funds are way too scarce to begin with, I failed to strike the right chord to get my

proposals funded. Over time, I learnt that by keeping the bigger picture in mind, I could tap into a richer variety of sources of financial support.'

Looking at Bosman's current portfolio of projects it is immediately clear that his new approach paid off. Besides project funding from NWO Science, his larger research projects are also funded by NWO AES (in Dutch: TTW), the EU, KWF Dutch Cancer Society, KiKa, and something called the Gieskes-Strijbis Fund. 'That grew kind of organically', Bosman comments. 'When I started my career, I was part of a group with a focus on logistics and smart energy systems. Though these are very relevant fields, I was not intrinsically enthused by them. In a side-project, I was working with someone from Amsterdam UMC, and together we got to thinking about the possibilities my techniques could offer the medical sector. The idea that my fundamental research could ultimately help patients really motivated me, and it marked the start of my efforts to build a network in that area. As a result, almost all of my current projects are related to the life sciences sector.'

New types of funding

Through his network, Bosman became acquainted with types of funding that might not be at the top of the list for most computer scientists. 'Take the Gieskes-Strijbis Fund. I had never heard of that. But a doctor I was collaborating with was informed of this fund through one of his patients. One research direction we were considering at the time turned out to fit their goals perfectly.' That links to one of the pieces of advice that Bosman often shares with his own PhD students and postdocs:



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'If you are contemplating writing a proposal for a certain call, always start by reading the call text carefully. If you have to make too many modifications to make your work meet the call's intent and conditions, don't even try. The chances of your proposal getting funded will be minimal.'

Bosman stresses that he is not advocating that scientists abandon their fundamental work to obtain grants. 'It is more a matter of putting your research into a broader context. What will others be able to do with the results of your work in, say, ten years' time? The word application is not something to be scared of. The fact that you are working on something that can have an impact doesn't mean you have to fully work on that application yourself. For every grant proposal I am writing, no matter how application-oriented the call might be, I always make sure it will contain some new fundamental science element.'

Recipe

All in all, Bosman has come to this recipe that works for him: 'It all starts by developing a vision on where you want to go with your research, what is needed to get there, and what other fields or sectors could benefit from your work. Be open for collaboration, don't keep everything to yourself. Build a network of people outside your own field with whom you engage in mutually beneficial partnerships. Once you have a viable vision and meaningful partnerships, your chances of winning will have increased substantially.'

FUNDING POSSIBILITIES FOR ICT RESEARCH

NWO disburses the main part of the Dutch government's budget for academic research, and for computer science, this mainly comes from NWO AES and NWO Science. For more medical-oriented research, you can also take a look at the funding schemes of NWO's sister organisation ZonMw.

On a European level, you can turn to the Horizon 2020 programme of the European Union, the granting schemes of the European Research Council (ERC), and incidental programmes of the European Science Foundation (ESF). Furthermore, in the Netherlands, the (often less-known) private non-profit sector funds about 2.5 percent of scientific research. An overview of available funds can be found, for example, on www.fondswervingonline.nl/activiteiten/onderzoek-en-wetenschap (in Dutch).