

## In the picture

# Discovering international talent in the field of noise and vibration research

*The KU Leuven Noise and Vibration research group, headed by Professor Wim Desmet and Dr. Bert Pluymers (IOF industrial research manager), is performing ground-breaking research in the fields of engineering dynamics and NVH (Noise, Vibration & Harshness), with application in the machine and vehicle design, manufacturing and health sector. As part of the group's international activities, the team has coordinated several Marie Skłodowska-Curie Actions Innovative Trainings Networks (ITNs) in Horizon 2020 and other Framework Programmes. In this article they share their experiences with ITNs.*

### *How were you involved in the European framework programmes for research and innovation?*

Our KU Leuven Noise and Vibration Research Group has a long tradition in European research programme participation, going back to the late 80'ies and projects under FP2. Ever since, we have been an active supporter of and participant in all Framework programmes, making use of the different project types, including the PEOPLE oriented schemes such as ITNs. Since the late 90'ies and triggered by some very successful ITN-predecessor projects such as EDSVS, participation in this type of projects took flight stimulated by the international context and the large socio-economic impact of our research topics, and the need for international training programmes therein. Currently, noise is still one of the major pollutants (see e.g. a recent WHO report confirming again that noise remains the second most deadliest pollutant in Western Europe) and training of a next generation of scientists and engineers to tackle these issues is of crucial importance.

### *You have already won many ITNs, why do you prefer this type of grant over the other Horizon 2020 grants?*

We like very much the focus on training and preparing young research engineers in their leading

roles to address socio-economic challenges. Also the open character in terms of addressed topics and themes is a factor of appeal.

ITNs really serve a need and are complementary to many other interesting Horizon 2020 schemes, in which we are involved and that are more thematic driven.

### *How do you prepare the proposal submission?*

Key ingredient for each and every ITN proposal preparation is the definition of a strong, relevant and complementary international and intersectoral consortium. Hand in hand with the consortium building (beneficiaries and associated partners), goes the detailing of a truly innovative and excellent research programme, complemented with an integrated training programme. Once these elements are all defined, the proposal writing itself starts, trying to capture these ideas in appropriate wordings.



Bert Pluymers (l) and Wim Desmet (r)

### *How do you find other beneficiaries and partners? How do you form a consortium?*

Fixing the consortium with the right beneficiaries and partners is of crucial importance. Given that the ITN scheme is all about training of researchers and has some specific requirements regarding ESR selection and recruitment, which is not always known in full detail by all organisations, it all starts with clearly communicating the programme, the rules and making sure organisations can internally

adhere to them. From KU Leuven side, we are very lucky to have the support of our Tech Transfer Office (KU Leuven Research and Development) which has ample experience in a.o. ITN finances and administration. Whenever needed, they help us out in supporting organisations who are less familiar with the ITN scheme. We typically first sketch the profile of the different partners we would need for a certain ITN network and then reach out to matching organizations, either through our wide network, or via brokerage and partner search organisations and tools. Often we are also contacted by external organisations, given our expertise in noise and vibration and with the Marie Skłodowska-Curie programmes.

### *What kind of agreements do you make with your partners?*

A mandatory consortium agreement is set up by default. On top of this, often additional bilateral secondment agreements are set up to facilitate ESR secondments to associated partners, tackling mostly local issues and practicalities.

### *How do you find Early Stage Researchers (ESRs)? Can you tell us a bit more about the recruitment process?*

Recruitment is possibly the biggest challenge when getting involved in ITN programmes. Although the ESR positions are considered to be very respected and prestigious, it is always a challenge to find and recruit internationally the top researchers you need for executing the ambitious training programmes. In our networks, we leverage as much as possible on the recruitment channels of all involved beneficiaries. Overall, this results in having a very wide reach-out to society and potential candidates and a massive selection process follows. In this process, each organisation follows its own procedures, yet all of them are aligned with the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

### *Where did the ESRs end up after the ITN ended?*

The more than 50 ESRs we hosted over the past decades continued their path in very diverse careers. Some of them embarked on academic careers, other followed a route to working in an industry organisation. Some remain at the organisation which they followed their ITN training, others moved back home, yet others continued

travelling the world. Common for all is that together a small eco-system is created of researchers in the field of noise and vibration engineering and that within this eco-system new collaborations are started, yes even new ITNs!

### *Can you give an example of a result (spin-off / concrete implementation) that came out of an ITN?*

Most of our ITNs leave a legacy book publication collecting the research advances made by the trained ESRs. These books are freely downloadable on our [website](#).

Another nice example of a project result are the software tools developed for advanced drivetrain modelling in close interaction with a.o. industrial partners such as Siemens Industry Software NV, and where the trained ESR is continuing his career at Siemens and further developing these tools and integrating them in tool chains such that leading companies in industrial machinery, automotive and aerospace industries can make use of them in their innovation processes.

### *What would be the most important things that you would advise potential applicants?*

Be persistent! The competition is fierce, with success rates dropping substantially below 10% the last couple of years. Even though you have a brilliant consortium, research and training plan, you might not make it to the short list this year. Learn from this and even further improve the proposal for next year's submission! And even more importantly, make sure you and your consortium understand that ITNs are about training people. As such they are completely different from 'regular' collaborative research projects. Embrace this difference and make sure you tap into the DNA of ITN.



For an overview of the past and running Horizon 2020 projects and projects funded by other sources (a.o. FWO and Vlaio) take a look at: <https://www.mech.kuleuven.be/en/research/mod/P/rojects>