

OPEN POSITION AT “MDW” IN THE FIELD OF MUSICAL ACOUSTICS

BATWOMAN (Basic Acoustics Training - & Workprogram On Methodologies for Acoustics - Network) is the **Initial Training Network (ITN)** No. 605867, funded under the FP7 Marie Curie programme of the EC. **Duration:** Sep. 1, 2013 - Aug. 31, 2017.

BACKGROUND: The BATWOMAN ITN aims at structuring research training in basic and advanced acoustics and setting up a work program on methodologies for acoustics for skills development in a highly diverse research field offering multiple career options.

The consortium consists of renowned public and private partners from musical acoustics, room acoustics and automotive acoustics who will merge their existing knowledge, extend it jointly and complement it with insights of recent sound perception research, (Fig. 1.) This will exploit existing synergies and overcome obvious fragmentation in research, methodology and basic as well as advanced acoustics training.

Providing interdisciplinary training and joining or exchanging methodology in research, is expected to have a strong impact on the skills of trained researchers as far as sound design capabilities, modelling accuracy, efficiency and applicable frequency range is concerned. Adding the understanding of human auditory perception will help to tackle the hard problem of sound quality parameters and to better understand stimulating effects on well-being and cognition of people exposed to sound, but also harmful effects, like annoyance or even deteriorating cognitive performance.

The ITN will provide interdisciplinary and intersectoral research training for excellence. It will structure existing PhD-level training in acoustics setting up European curricula with compatible and recognised courses offered by Universities and private enterprises. Simultaneously it will push the state of the art in vibro-acoustic modelling and in interdisciplinary design optimisation by initiating a joint research effort increasing critical mass. The complementary structure of the network will make it not to

break apart after the ITN project period. It is rather expected that the methodologies used to analyse, design and optimise transport vehicles, rooms and musical instruments will grow together and will be further developed in an interdisciplinary joint effort.

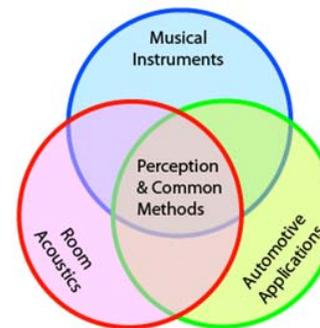


Fig. 1: BATWOMAN R&D scope.



Fig. 2: BATWOMAN consortium.

CONSORTIUM: contains partners (6 universities, 1 research institutes and 4 companies) specialised in three specific application fields of acoustics: Automotive sector, room acoustics and musical instrument acoustics, see Fig. 2. The industrial partners bring in application knowledge and expertise, and the research partners bring in a range of engineering methodologies, the capability of PhD research training, provision of courses and dissemination of results.

MARIE CURIE ELIGIBILITY CRITERIA – in short:

- **Experienced Researcher (ER):** researchers having at least four years of research experience (full-time equivalent) since gaining a university diploma giving them access to doctoral studies, in the country in which the degree/diploma was obtained or researchers already in possession of a doctoral degree, regardless of the time taken to acquire it.¹

COORDINATOR: ViF - Kompetenzzentrum - Das virtuelle Fahrzeug Forschungsgesellschaft mbH, <http://www.v2c2.at/> in Graz, Austria.
BATWOMAN Coordinator: **Dr. Michael Nöst**, Michael.Noest@v2c2.at

Within BATWOMAN, MDW (<http://iwk.mdw.ac.at>) is looking for an ER (duration 12 months) focusing on “Common framework for physical modelling and optimization across different domains”

Objectives: The ER will cooperate with all ESRs working on modelling issues to ensure the compatibility of interfaces, reusability of program code and completeness of documentation. He will extend existing frameworks for integration of different models and he will challenge theoretical results by verifying them in an industrial context.

Tasks and methodology: Staying in contact with all ESRs developing simulation models and keeping track of their progress. - Directing the attention of those ESRs to code compatibility, reusability and completeness of documentation. - Enforcing interface standards, naming and calling conventions and a common documentation format (Doxygen). - Collecting real world benchmark problems and requesting ESRs to provide experimental data for verification.

Results: Common framework for simulation models developed by different ESRs. - Collection of user and programmer manuals. - Open Source project publications for acoustic simulation. - Verification benchmarks and experimental data for verification.

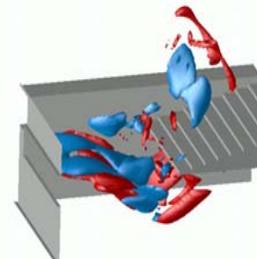
CANDIDATE PROFILE: All candidates must be fluent in spoken and written English. The research is highly multidisciplinary. An ideal candidate has an M.Sc. in engineering (e.g. computer science), an adequate mathematical & computational background and he or she should at least have a strong interest in music. He or she will get a senior supervisor and will be encouraged to receive complementary skills training by the international network.

- Specific experience with simulation methodologies and software tools is an advantage.
- Knowledge in acoustics of fluids and structures is highly welcome
- Knowledge of programming languages (C/C++, Fortran, Visual.Basic, ...) and/or knowledge of Matlab is important.
- All members of the network are equal opportunity employers, both female and male candidates are invited to apply.

The research activities will mainly be carried out at Partner **MDW** located in (**Vienna, Austria**), possibly combined with research visits and/or short-term secondments to other members of the network.

APPLY NOW! Start date target: between March 1st and July 1st, 2016

APPLICATION: To apply, please send a **detailed CV** together with a **letter of motivation** and **names of reference(s)** to



Prof. Wilfried Kausel
kausel@mdw.ac.at

Inst. of Music Acoustics
Univ. of Music & perf. Arts
Anton v. Webern Platz 1
1030 Vienna
Austria



The remuneration will be in line with the Austrian Kollektivvertrag for University employees and the EC rules for Marie Curie grant holders and consists of a salary augmented by a net mobility allowance. <http://cordis.europa.eu/fp7>.

¹ Among others, following criteria apply for eligibility:

- the researcher shall not be a national of the State in which the hosting partner's research team is located
- at the time of appointment, the researcher may not have resided or carried out her/his main activity in the country of the hosting partner for more than 12 months in the 3 years immediately prior to her/his appointment
- women are especially encouraged to apply.