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MSCA-SE, MSCA-DN, MSCA-DN-JD how to get there?

Experience from CaLIGOLA, CaLiForNIA, …

Department of Mathematics and Statistics, SCI MUNI

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Jan Slovák

How to be in the right network in the right time?

International visibility. All local team-leaders must be very well established; standard provincial track records and approaches fail!

Timely chosen hot topics: there must be some clear and unusual synergy in the proposal, the MUNI research should provide some breakthrough bonus for the network!

Reliability and trust: the local team-leader and his team must have some good track record of previous collaboration and project management!

The main points of the MSCA-SE CaLIGOLA

A followup of successful COST action, very strong network co-ordinated by Bologna, including ETH Zurich, UC California, …, and also commercial partners like Thales

Novelty and synergy based on the fact, that classical Maths handling symmetries is now essential in Physics, Quantum Computing, and Deep Learning

Although I am the leader of WP1, the classical Lie theory and its supersymmetric versions, nearly everybody at the department could exploit the secondments – at least 37 menmonths in total

The opportunity is mostly offered to PhD students of Mathematics and Theoretical Physics, and on top of the secondments, there is the other B1 overheads pocket allowing any short stays …!

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The main points of the MSCA-DN CaLiForNIA

Synergy with the earlier CaLIGOLA project, shared educational and dissemination activities. Similar topics, again focused on exploitation of demanding Mathematics in hot new areas.

11 doctoral positions (2 at MU), joint call for all positions, each one having a co-supervisor at a foreign university, common courses and activities, including secondments with commercial partners (like Thales again)

Again, I am the leader of WP1, the classical Lie theory and its supersymmetric versions, I supervise Australian student, another German one is with Katharina Neusser. We had 66 international applicants.

The project created an international community spread across the network and linked to standard doctoral students in our programme (though the opportunity to hire more of them was not used much).

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Risks and problems

The students in the programme are much better financed – jealousy …

The project was drafted under the previous director – the new one showed miserable understanding …

With the common project-based standards and generous secondments, some compromise is due …

The project financing is for three years only, not completely compatible with our scheme …

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Implementation and impact - CaLIGOLA

Flat rate €2300 per months for secondments, creating another €1300 for small trips or equipment.

Most easy with doctoral students (via stipends, they just must not be in any contract to MU)

On top of that, further overheads for MU available.

Secondments only within the network, but the rest anywhere.

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Implementation and impact - CaLiForNIA

The students have got extraordinary support (for Czech standards), including travel money.

They are obliged to have secondments with the co-supervisors and in commerce.

Withing the network, the students are offered common courses, workshops, etc.

The international common recruitment could/should serve as opportunity for hiring more student with other funding.

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Where to go next?

Being successful offers further challenges and invitations, we are in other three new related projects submitted this year:

QUIMERA is a new COST action proposal where MU plays important role. The aim is again to bridge classical pure Mathematics towards urgent applications (like quantum computing and geometric deep learning)

ARGO is a huge project aiming at new approach towards Geometry informed Information Science and AI tools in clinical research (I am WP leader, under ICS, we have also brought FNUSA involvement)

CaLIQANTA is a follow-up project to CaLIFORNIA, this time a DN-JD scheme, if successful it will bring 7 fully financed doctoral students to MUNI (was submitted this weekend, under SCI MUNI).

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Let us get more of them!

Thanks for attention!

Jan Slovák

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