

**Name of the MSC Fellow: Giovanni Moreno**

**Nationality: Italian, Polish**

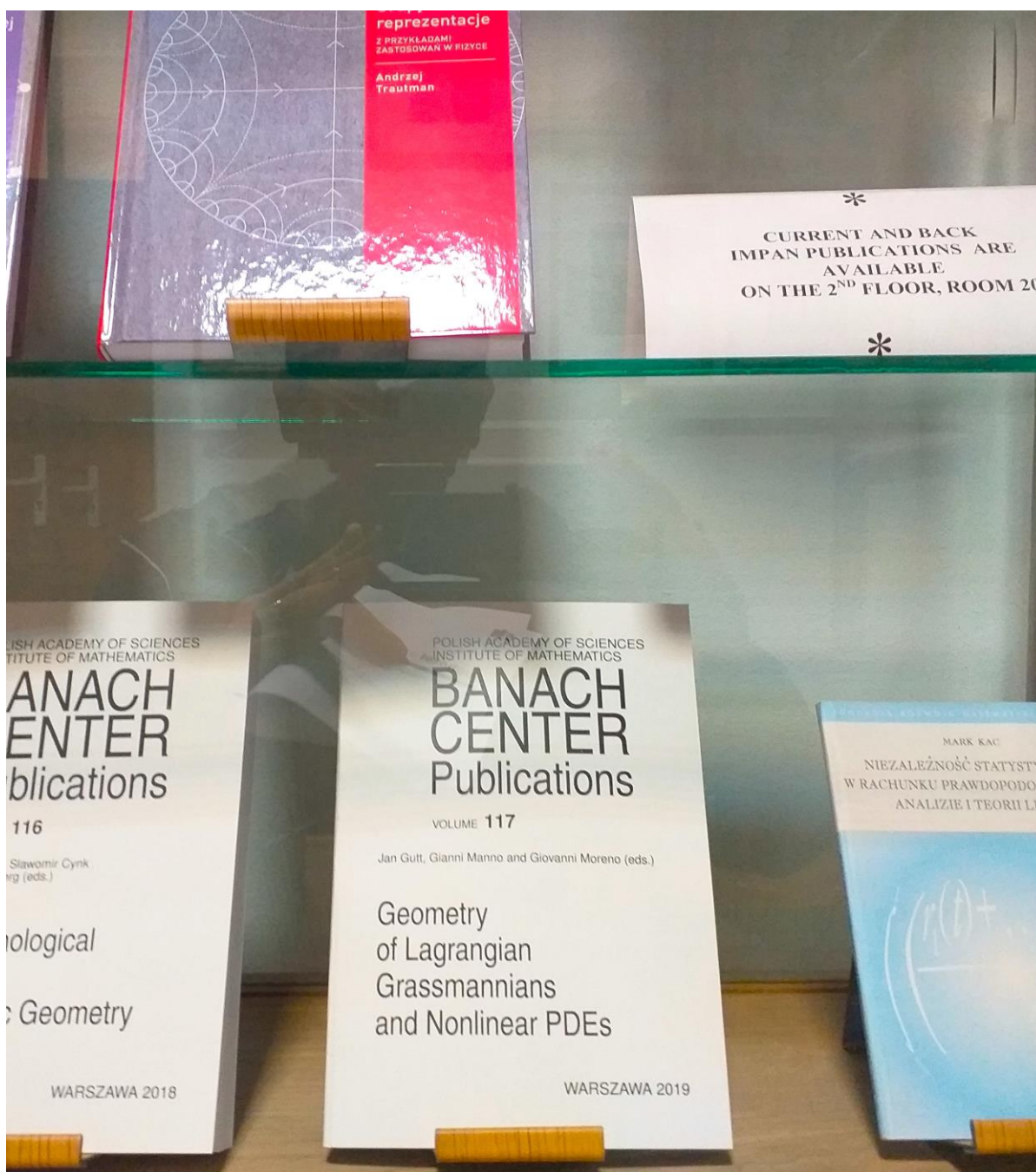
**Host organization: Institute of Mathematics of the Polish Academy of Sciences**

**Country of the Host: Poland**

**Project Acronym: GEOGRAL**

**Project start and end date: 01/09/2015 - 31/08/2017**

**Type of MSC action, H2020: IF**



*Picture 1. The volume “Geometry of Lagrangian Grassmannians and Nonlinear PDEs” (the very same title of the MSCA action) is now on display in the Library of the Institute of Mathematics of the Polish Academy of Sciences.*

**Your story:****Project objectives and research field:**

The research field is a very specialized area of Mathematics known as “the geometry of nonlinear partial differential equations (PDEs)”; the project aim was to develop a new tool in this discipline – a geometric object called the “Lagrangian Grassmannian” already known in adjacent areas - and to employ it to obtain new classification results.

**Tell us why your topic is important and/ or how it brings to advancement in your research field:**

The field of geometry of nonlinear PDEs is highly interdisciplinary and constantly requires fresh momentum and inspirations coming from neighboring disciplines – mainly differential and algebraic geometry; the main research interest of GEOGRAL, namely the Lagrangian Grassmannian, is a key gadget lying at the crossroad between the three aforementioned disciplines: as such, its development is beneficial not only in its main applicative ground (nonlinear PDEs) but it also has repercussions in other contexts. The pivotal role of GEOGRAL’s main object of study is mirrored by the success obtained by the homonymous volume published by the Banach Centre of the Polish Academy of Sciences.

**What are the benefits of participating in a MSC action?**

A project in pure mathematics, by definition, does not have any industrial application; nevertheless, it triggers a lot of ancillary activities (editorial, organizational, logistic) and provides inspiration for fellow scientists as well as for younger students who seek a motivation to pursue a career in science. Thanks to the prestige of MSCA I easily got a teaching and research position at the University of Warsaw and thanks to the grant-writing skills I’ve acquired I was able to win a Polish national grant; last but not least, I learned Polish and got Polish citizenship, which enormously simplifies my life here. I lead science popularization projects targeting Warsaw’s high schools, thanks to which I can offer knowledge and guidance to extremely talented boys and girls; at the same time, I haven’t broken my bridges with my country of origin and I often travel there to cooperate with excellent Italian colleagues.

**Did you encounter any challenges during application/ implementation and did you get any help?**

Yes of course, I did encounter a lot of challenges – hadn't I, the whole endeavor would have been pointless! It is only through grant-writing difficulties that we shape our scientific personality and become self-aware of what we want, what we are likely to obtain and – most importantly – what is beyond our capabilities. I won the MSCA grant at the second try, and I consider myself very lucky; friends, colleagues and my supervisor helped me a lot during the grant-writing phase: the scientific content of the project was mine and mine alone, though they suggested key stylistic and presentational adjustments.

**Why did you choose a widening country as a Host? What was the reason that convinced you? What is making you professionally happy here?**

Do I really have to explain it? Almost by definition, a widening country is a country where “you can breathe a dynamic atmosphere” - because something is changing; and this concerns not only economics but also academic, family and everyday life. Moving to a widening country is a strategic move: it requires patience and determination at the beginning, but the payoff won't make you wait long. The Institute of Mathematics of the Polish Academy of Science is the best mathematical institution in Poland and one of the best in Europe; during my fellowship I could perceive a tangible grow in its renown, recognition and financial support: it was really exciting to be a part of it and, to a lesser extend, give my contribution to it. The Department of Physics of the University of Warsaw, where I work now, is of a very high level – comparable with famous English colleges – and the best students go there; the atmosphere is collaborative and the fact that I am from abroad adds a necessary ingredient of fun.

**Would you recommend others to apply? What useful advice/ tips can you give them?**

Beyond any doubt! An MSCA fellowship can drastically change your career – and the change is always for the best. I recommend it especially to the “lone gunners” like me – that is, persons who do not have the (dis)fortune of being the protégé of some important academic personality; too often, indeed (especially in the most developed countries), academic career reduces itself to the choice of a powerful enough boss. The European-wide breadth of the MSCA is in itself a safeguard against provincialisms and the formation of closed auto-referential scientific cliques. My only advice: be original!