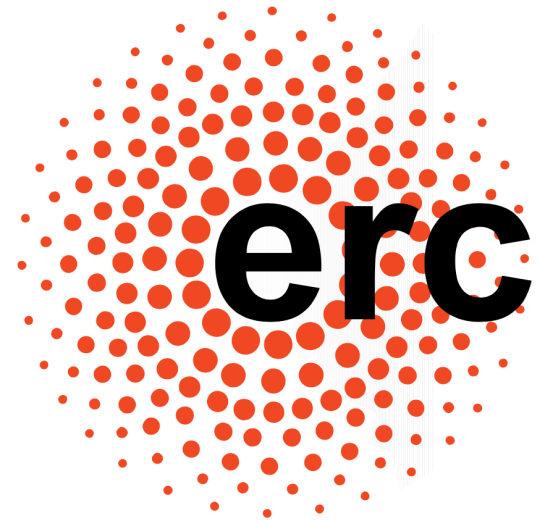


# My experience as an ERC StG winner

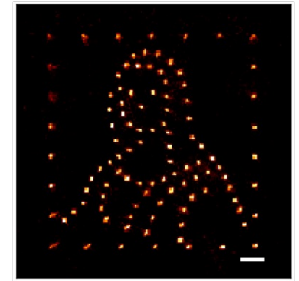
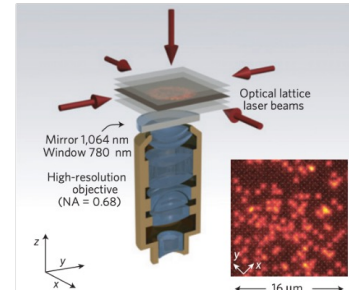
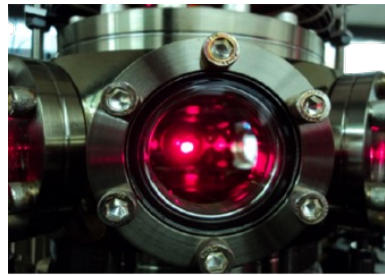


Woojin Kwon

Ulsan National Institute of Science & Technology (UNIST),  
Department of Physics,  
University of Milan, Department of Physics

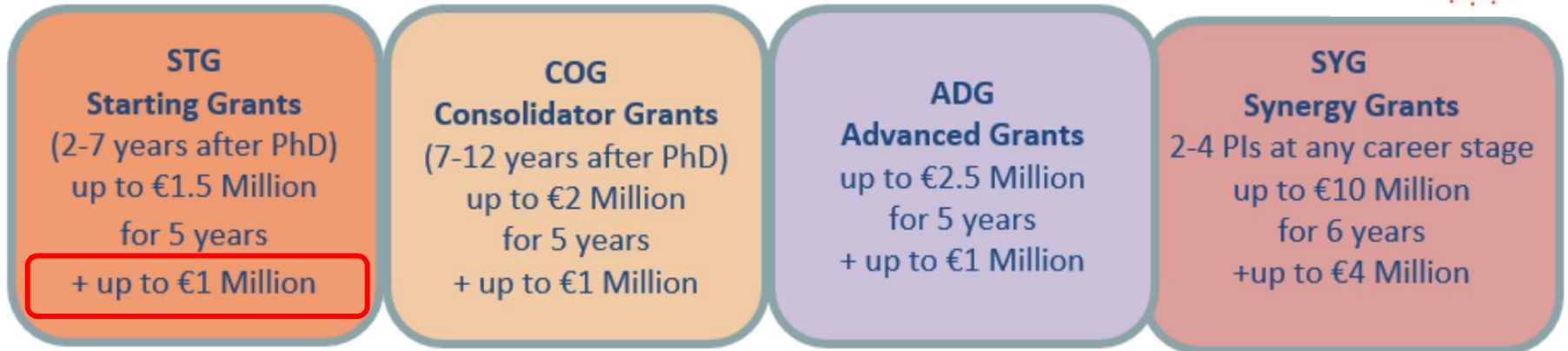
# Who am I?

- Ultracold atom quantum gas experiments (Atomic physics)



- Postdoctoral researcher ~ 2022/07 CNR-INO, Firenze, Italy  
- *Marie Curie fellow (2019-2021)*
- 2022/08 – present: UNIST, department of physics
- 2024/01 – present: University of Milan, department of physics  
- *PI of an ERC 2022 Starting Grant: 2024/01/01 ~ 2028/12/31*

# What are ERC grants?



- Supporting **all scientific frontier research** by the best researchers
- **Excellence** is the sole criterion of evaluation.
- NO predetermined priorities
- Open to **all Nationalities** (**a non-EU PI can keep home affiliation**)  
→ Possible additional funding for a non-EU PI  
(Must be requested from the proposal phase)

# ERC grants

- Granted to a PI, NOT to a host institution: **Grant portability**
  - an ERC winner is free to change the host
  - **Negotiate your working conditions with your host!**
- e.g., an experienced postdoc can get a tenure track or even a tenured position.
- € 1.5 Million = € 0.3 Million/year for 5 years ...? **NO!**
  - **To start your new lab from scratch,**  
**use as much as you want at the beginning.**
- Duty to reside in an EU or associated country at least 50% (StG)

# Evaluation process

## ERC StG

1. Submit **two versions of proposals**:

5-page synopsis, 15-page detailed proposal, and CV  
(One should choose a host institute before submission.)

2. 1st round: only 5-page synopsis matters.

If one passes the 1st round,

3. 2nd round: interview (30 mins)+ all the proposals  
(I had my online interview in ULSAN)

\*Evaluation panel: ~ 10 renowned scientists

10 months

+ external experts

→ Highly competitive (12 - 14% success rate)

# My ERC StG with University of Milan, Italy



Headquarter of Università degli Studi di Milano



UNIVERSITÀ DEGLI STUDI DI MILANO  
DIPARTIMENTO DI FISICA  
“ALDO PONTREMOLI”

- Why Milano, Italy?  
→ Postdoc research in Firenze, Italy (2018/Feb ~ 2022/July).
- A suggestion of **half-and-half**  
(Possible? YES! but it might depend on your institutions.)

# My ERC StG with University of Milan, Italy

- Tenured position in Milan since Jan/2024  
(My Marie Curie fellowship and ERC grant helped)
  
- 1. Indirect cost → 4% instead of 20%
- 2. My salary paid by the University, not from the grant
  
- **Keeping my position at UNIST**  
(UNIST & UNiMi & ERC agency all agreed)  
→ International project: **my UNIST students will do their graduate studies in Milan.**

# Some Tips for ERC Stg Grant

■ **Only Excellence** of PI and research project

## Reviewer 1

“My main worry is that this topic is quite **niche** and it is not clear whether the impact will be huge and where it goes long term.”

## Reviewer 7

“The objectives are **very ambitious**, some of them being beyond the state of the art..... The experimental methodology involves several novel methods on the manipulation of the vortices, but it **mostly relies on previous research** performed by the PI.”

## Reviewer 10

“The project seems to be an interesting evolution of existing approaches and experiments, **but it is not really groundbreaking.** “



# Some Tips for ERC Stg Grant

## Reviewer 2

“This is a **high-risk project** and I do not expect that all the proposed studies could be achieved, both because of their intrinsic difficulty and their large number. However, the proposed platform is interesting, and it is versatile enough to provide **high impact results even with a partial success** among all the objectives.”

## Reviewer 3

“While I do not expect any conceptual revolution emerging from this project, a complete experimental understanding and illustration of vortex dynamics in superfluids is definitely a **high-gain enterprise**, with the potential of entering the new generation of textbooks in hydrodynamics and triggering new research lines in neighboring fields.”

# Be ambitious (high risk/high gain)

## Reviewer 5

“This is a **highly ambitious** and novel approach.

.....

However, I expect **the rewards to be high and if only 50% of the programme is successful within the period of the grant** it will nevertheless make an important and novel contribution to the field of quantum gases and related disciplines,.....”

## Reviewer 8

“The **third section is the most exciting** with the goal of manipulating vortices with optical trapping.....

**However, having this section as a last part of the project reduces its ambition** due to the limited time remaining to achieve the goals. “

- Be ambitious! (better not be incremental)
- but do not show too many of your fantastic ideas

# Summary

- ERC grants are the most prestigious grants in the EU.  
→ A grantee gains strong power with ERC.
- For young researchers (e.g. postdocs), ERC StG could be a very nice opportunity.  
→ Both for job opportunity and for financial autonomy
- If one already has a position in Korea, one can negotiate the possibility of dual affiliations.
- Be transformative/not incremental

## Special thanks to

Dr. Hyong-ha Kim  
(KRISS, ERC National Contact Point)



And to my institution UNIST & UNiMi  
for allowing this international venture

**Thank you very much for your  
attention**