



Palacký University
Olomouc



H2020

H2020 NONGAUSS

Twinning in Non-Gaussian
Physics for Quantum Technology

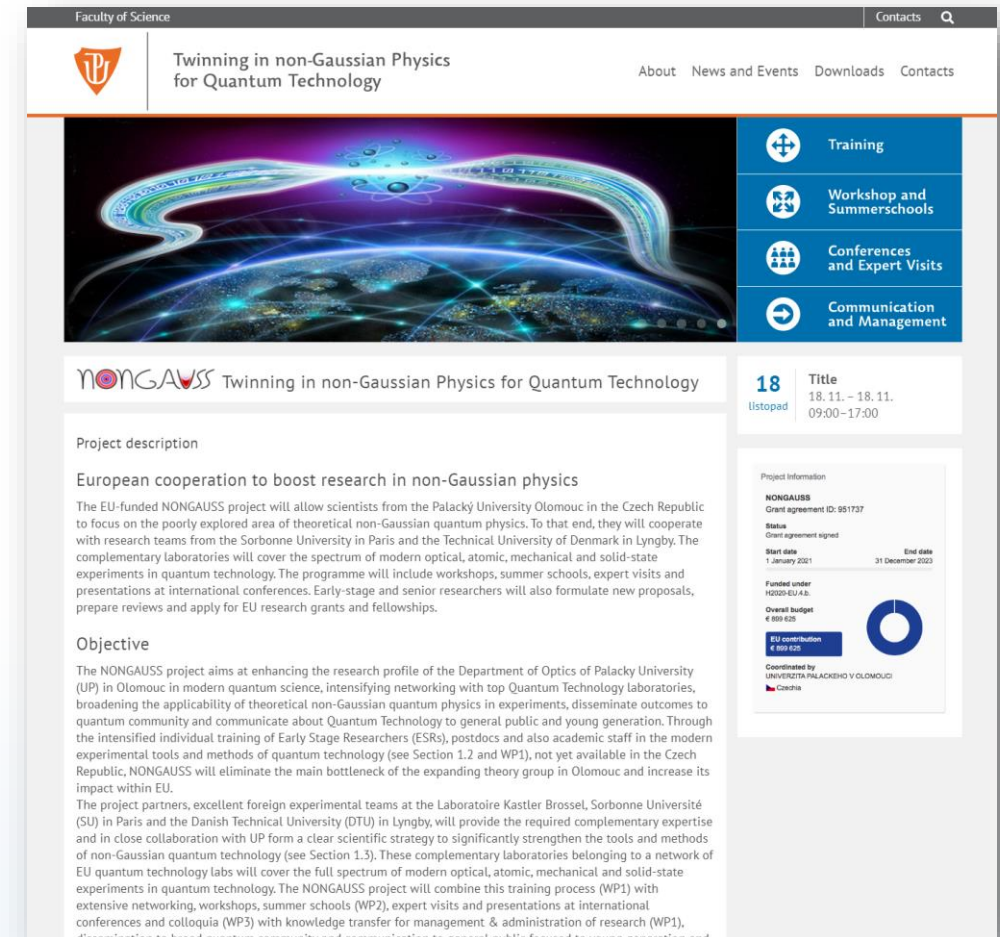
Mgr. Petra Cabišová
katedra optiky PŘF UP



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under the Grant Agreement No 951737.

NONGAUSS: TWINNING IN NON-GAUSSIAN PHYSICS FOR QUANTUM TECHNOLOGY

- Call: H2020-WIDESPREAD-2020-5
- Type of Action: CSA
- Acronym: NONGAUSS
- Number: 951737
- Duration: 36 months
- Start Date: 01 Jan 2021
- Estimated Project Cost: €899,625.00
- Requested EU Contribution: €899,625.00



The screenshot shows the official website of the NONGAUSS project. The header includes the Palacký University Olomouc logo and the project title. A navigation menu on the right lists 'Training', 'Workshop and Summerschools', 'Conferences and Expert Visits', and 'Communication and Management'. The main content area features a large abstract image of quantum physics and a detailed project description. The description states that the EU-funded NONGAUSS project aims to boost research in non-Gaussian physics through cooperation between scientists from Palacký University Olomouc, Sorbonne University in Paris, and the Technical University of Denmark in Lyngby. It outlines the project's objective to enhance the research profile of the Department of Optics at Palacký University and mentions the involvement of international partners like Laboratoire Kastler Brossel and the Danish Technical University. A sidebar on the right provides project information, including the grant agreement ID (951737), start and end dates (January 2021 to December 2023), and a funding breakdown showing the EU contribution of €899,625.00.

Faculty of Science

Contacts

Twinning in non-Gaussian Physics for Quantum Technology

About News and Events Downloads Contacts

Training

Workshop and Summerschools

Conferences and Expert Visits

Communication and Management

NONGAUSS Twinning in non-Gaussian Physics for Quantum Technology

18 Listopad

Title 18. 11. – 18. 11. 09:00 – 17:00

Project description

European cooperation to boost research in non-Gaussian physics

The EU-funded NONGAUSS project will allow scientists from the Palacký University Olomouc in the Czech Republic to focus on the poorly explored area of theoretical non-Gaussian quantum physics. To that end, they will cooperate with research teams from the Sorbonne University in Paris and the Technical University of Denmark in Lyngby. The complementary laboratories will cover the spectrum of modern optical, atomic, mechanical and solid-state experiments in quantum technology. The programme will include workshops, summer schools, expert visits and presentations at international conferences. Early-stage and senior researchers will also formulate new proposals, prepare reviews and apply for EU research grants and fellowships.

Objective

The NONGAUSS project aims at enhancing the research profile of the Department of Optics of Palacký University (UP) in Olomouc in modern quantum science, intensifying networking with top Quantum Technology laboratories, broadening the applicability of theoretical non-Gaussian quantum physics in experiments, disseminate outcomes to quantum community and communicate about Quantum Technology to general public and young generation. Through the intensified individual training of Early Stage Researchers (ESRs), postdocs and also academic staff in the modern experimental tools and methods of quantum technology (see Section 1.2 and WP1), not yet available in the Czech Republic, NONGAUSS will eliminate the main bottleneck of the expanding theory group in Olomouc and increase its impact within EU.

The project partners, excellent foreign experimental teams at the Laboratoire Kastler Brossel, Sorbonne Université (SU) in Paris and the Danish Technical University (DTU) in Lyngby, will provide the required complementary expertise and in close collaboration with UP form a clear scientific strategy to significantly strengthen the tools and methods of non-Gaussian quantum technology (see Section 1.3). These complementary laboratories belonging to a network of EU quantum technology labs will cover the full spectrum of modern optical, atomic, mechanical and solid-state experiments in quantum technology. The NONGAUSS project will combine this training process (WP1) with extensive networking, workshops, summer schools (WP2), expert visits and presentations at international conferences and colloquia (WP3) with knowledge transfer for management & administration of research (WP1), dissemination to broad quantum community and communication to general public focused to young generation and

Project information

NONGAUSS
Grant agreement ID: 951737

Status
Grant agreement signed

Start date 1 January 2021 End date 31 December 2023

Funded under
H2020-EU A.B.

Overall budget
€ 899 625

EU contribution
€ 899 625

Coordinated by
UNIVERSITA PALACKÉHO V OLMOUCI
Czechia

<http://nongauss.upol.cz/>

NONGAUSS CONSORTIUM

COORDINATOR:



PARTNERS:



DENMARK TECHNICAL UNIVERSITY



SORBONNE UNIVERSITY

PI:

prof. Mgr. Radim Filip, Ph.D.



Prof. Dr. Radim Filip

Professor of Optics and Optoelectronics

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Czech Republic, Phone: +420 585634249
Fax: +420585225246, filip@optics.upol.cz

NONLINEAR QUANTUM PHYSICS

Curriculum Vitae:

2003: PhD in Optics and Optoelectronics, Palacky University
2005: Habilitation in Optics and Optoelectronics, Palacky University
2005-2006: Alexander von Humboldt fellowship, MPL Erlangen
2006: Associated Professor, Palacky University
2007: Special Recognition of Czech Science Foundation
2007: Alexander von Humboldt Return Fellowship
2008: visiting researcher, DTU Lyngby, Denmark
2010: visiting professor, ENS Paris-Cachan
2011: Prize of President of Czech Science Foundation
2011-2014: manager, Center for Information and Uncertainty
2014-2018: co-PI, Center of Excellence for Classical and Quantum Interactions in Nanoworld
2016: Full Professor, Palacky University
2016-2020: Member of Neuron Foundation Scientific Board
2018: Otto Mønsted Professorship at DTU Lyngby, Denmark
2021-2023: PI, Twinning in non-Gaussian Physics for Quantum Technology
2021-2025: PI, Center of Excellence for Quantum non-Gaussian coherence

NONGAUSS: OBJECTIVES

WHAT:

- **Enhance the research profile** of the Department of Optics of UP in Olomouc in modern quantum science;
- **Intensify networking** with top Quantum Technology laboratories;
- **Broaden the applicability** of theoretical non-Gaussian quantum physics in experiments;
- **Disseminate outcomes** to quantum community and **communicate** about Quantum Technology to general public and young generation;

NONGAUSS: OBJECTIVES

HOW:

- **Intensified individual training of Early Stage Researchers (ESRs)**, postdocs and academic staff in the modern experimental tools and methods of quantum technology **not yet available in the Czech Republic => eliminating** the main **bottleneck** of the expanding theory group in Olomouc; **increase its impact within EU**;
- **The project partners** will provide **complementary expertise**; in close collaboration with UP **form a clear scientific strategy** to significantly **strengthen** the tools and methods of non-Gaussian quantum technology;
- **Full spectrum of** modern optical, atomic, mechanical and solid-state **experiments** in quantum technology;

NONGAUSS: OBJECTIVES

WORKPACKAGES:

- The NONGAUSS project will combine this **training process** (WP1) with
- **extensive networking, workshops, summer schools** (WP2);
- **expert visits and presentations at international conferences and colloquia** (WP3);
- **with knowledge transfer for management & administration of research** (WP1);
- **dissemination to broad quantum community** and **communication to general public** focused to young generation and policymakers (WP4);
- The project will **contribute** to new experimental proposals, **prepare** publicly available **reviews**, and **stimulate submission** of new EU Research grant applications and fellowships.

PROPOSAL EVALUATION FORM (SUMMARY REPORT)

NONGAUSS (v1) EVALUATION RESULTS (2018):

TOTAL SCORE: **12.50**

THRESHOLD: 10

- **Excellence: 4.50** (Threshold: 3/5.00)
- **Impact: 4.00** (Threshold: 3/5.00)
- **Implementation: 4.00** (Threshold 3/5.00)

SUMMARY REPORT: EXCELLENCE

- ✓ **Objective of the action:** clear, measurable, realistic, achievable, **fully in line** with the work program
- ✓ **Proposed research:** **of good quality**, **appropriately** linked to the scientific, strategic and insitutional objectives
- ✓ **Innovation aspects** – **sound**, well argued
- ✓ **Research and innovation strategy:** **credible**, convincing

- ✗ **Research and innovation activities** – **not detailed enough** (to fully demonstrate they will adequately contribute to the project goals)
- ✗ **Interaction with national and regional authorities and stakeholders** is presented in a **very generic way**, **insufficiently** detailed

EXCELLENCE: REMEDIAL MEASURES

- Adding detailed description + table with **Objectives** (strategic, scientific, institutional, public)
- Alignment to the **National Research and Innovation Strategy RIS3** and **RIS3 Strategy of the Olomouc Region**
- Stakeholders **specification**

SUMMARY REPORT: IMPACT

- ✓ **Impact on R&D:** good; **convincing, in line** with the program
- ✓ **Clear demonstration** that it will reduce networking gaps and deficiencies
- ✓ **Dissemination:** **well elaborated, coherent,** pertinent to the proposed work
- ✓ **Relevant target audience** identified; communication **well addressed**
- ✓ **Communication strategy:** **adequately** presented; **appropriate** communication activities
- x **Fails to convince** that the capacity to receive **funding from competitive research** will be improved
- x **Timeline of the different activities** is **not sufficiently detailed**
- x **Data and knowledge management** presented in a **very generic** way
- x **IPR management** is **minimally** presented
- x Expected large number of **high impact publications** **not justified**

IMPACT: REMEDIAL MEASURES

- Additional **DETAILED description** of expected improved capacity of the NonGauss Team to receive funding from competitive research (history of financial support already obtained =>national and international projects obtained before 2018; achievements; qualified estimation for future project applications)
- Gantt chart for **ALL** activities (WP activities; Tasks; Milestones; Deliverables)
- **Additional section** describing Data and Knowledge Management and IPR information (transparent procedures of data collection; ownership of knowledge; dissemination in Golden open-access model; FAIR principle for data management)
- Additional **DETAILED justification** of the expected amount of high impact publications (detailed description of the publishing performance of the NonGauss team)

SUMMARY REPORT: IMPLEMENTATION

- ✓ **Work plan:** **well structured** and effective;
clear measures to support the action objectives
- ✓ **Packages:** clear, **appropriately** elaborated,
comprehensively related to the objectives
- ✓ **Gantt chart** – very good
- ✓ **Organizational and decision-making structure:** **properly** addressed
- ✓ **Governance structure:** sound; roles of PI and WP leaders **appropriate**
- ✗ **Task leaders and person-months allocation** for tasks **not specified** with **enough precision**
- ✗ **Small number** of deliverables
- ✗ Identified **risks and mitigation measures** are **very general** and **not satisfactorily** elaborated

IMPLEMENTATION: REMEDIAL MEASURES

- **Re-structured WP management:** WP leaders (WP1-WP4); WP divided into Tasks
=> Task Leaders; re-calculated the PM allocation; specified workload/TL
- **Increased** the total amount of **deliverables** to 12
- New section (**supported by figures**) added: **Decision-making mechanism** (within the UP project team, within the Consortium); **Conflict Resolution procedures** (specified in CA); **Innovation management incl. risk mitigation plan** (continuous monitoring & reporting, International Management Board, International Advisory Board)

PROPOSAL EVALUATION FORM (SUMMARY REPORT)

NONGAUSS EVALUATION RESULTS (2020):

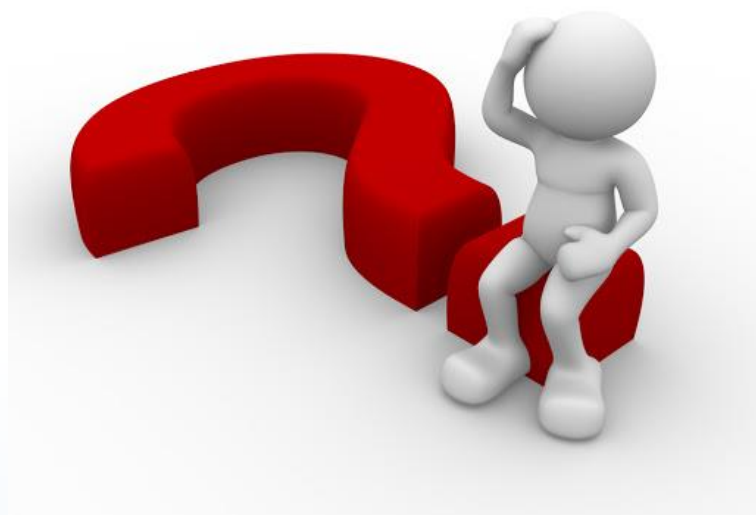
TOTAL SCORE: **13.50**

THRESHOLD: 10

- **Excellence: 5.00** (Threshold: 3/5.00)
- **Impact: 4.00** (Threshold: 3/5.00)
- **Implementation: 4.50** (Threshold 3/5.00)

QUESTIONS?

SIMPLY ASK!



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THANK YOU FOR YOUR ATTENTION!