

Temat: Fw: [MTPR] 05.11.2025 Dr hab. Michał Parniak - Quantum measurements of radio waves with Rydberg atoms

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Dear Colleagues!

We are pleased to invite you to the following Modern Trends in Physics Research (MTPR) seminar of this academic year, which will be held on **November 5 at 13:00 in the Prof. Arkadiusz Piekara Auditorium, Collegium Physicum.**

Dr hab. Michał Parniak

Centre for Quantum Optical Technologies and Faculty of Physics, University of Warsaw
(<https://www.qodl.eu/michal-parniak/>)

will speak about:

"Quantum measurements of radio waves with Rydberg atoms"

Abstract: *Rydberg atoms have emerged as an exciting tools for quantum sensing, allowing for detection of electromagnetic fields from MHz to THz frequencies. The atomic media offer broad tuning, high Q-factor and intrinsic calibration. I will outline those new advantages, which stem from fundamental physics but lend themselves to engineering application. I will discuss our efforts to design novel protocols for Rydberg sensing, both in hot and cold atomic ensembles, using techniques such as interaction-assisted measurements or multi-wave mixing.*

Chairman: B. Graczykowski

Additional Information: All are invited to Coffee with the Speaker, starting at 12:30 in front of the auditorium. Please follow the news on the MTPR web page (<http://mtpr.amu.edu.pl>), where information about the subsequent events will be available soon.

Those who cannot participate in person can follow the talk using Microsoft Teams:

[Dr hab. Michal Parniak - Quantum measurements of radio waves with Rydberg atoms | Dołącz do spotkania | Microsoft Teams](#)

Sincerely Yours,

Aleksandra Trzaskowska
Konrad Kapcia
Arkadiusz Józefczak
Bartłomiej Graczykowski