

Welcome to LIDINE 2022

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952480



Welcome to Warsaw

- Thank you for coming, despite difficult times...
- Uniqueness of LIDINE: the spirit of collective brainstorming and open-minded knowledge sharing across experiments and fields
- Get involved in discussions, ask questions, share your ideas, inventions and experiences
- Initiate new collaborations

- We hope you enjoy your time here! Best if you can stay a couple of days longer to explore the city

AstroCeNT / NCAC PAS

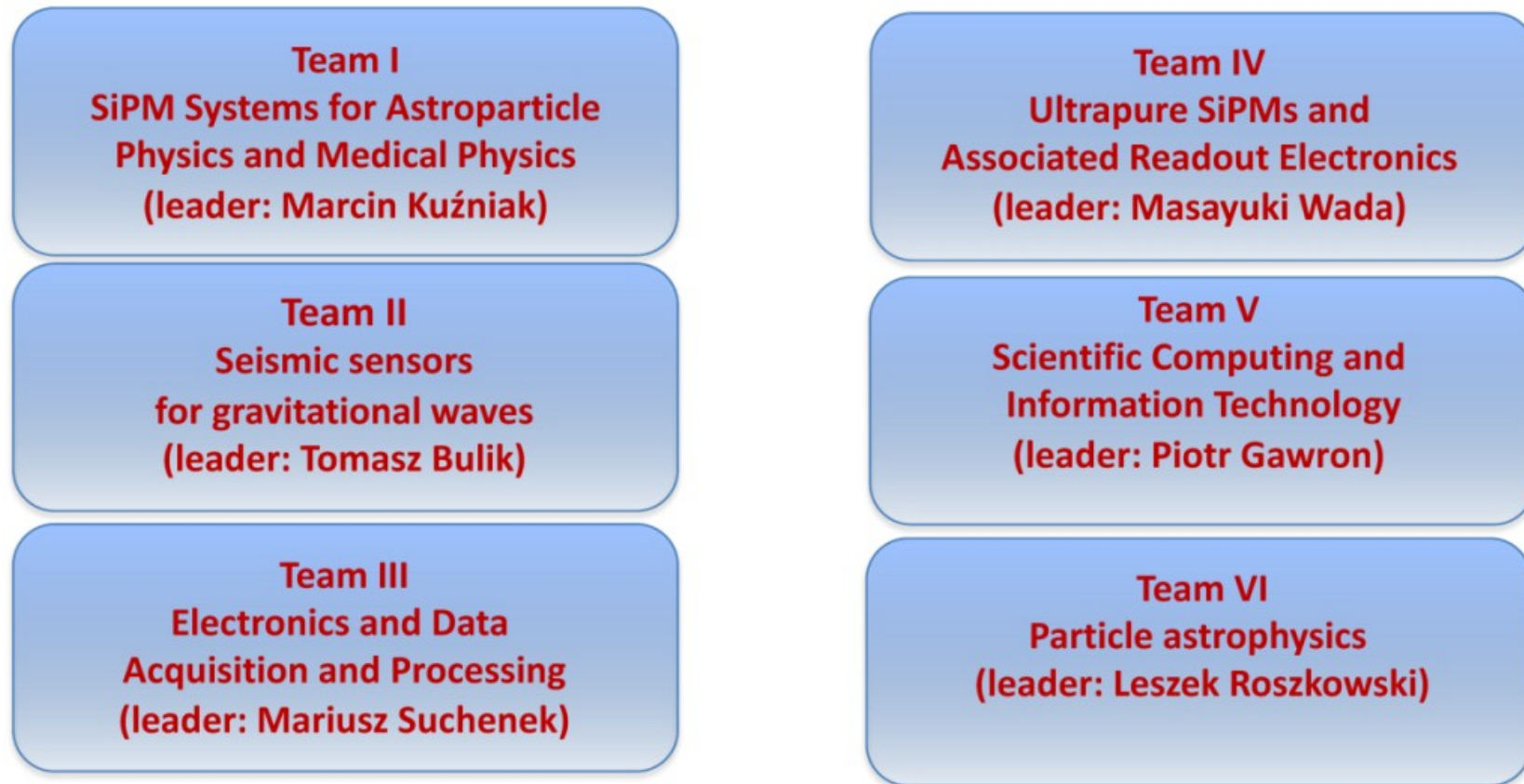
- **AstroCeNT, www.astrocent.camk.edu.pl**
 - International Research Agenda Programme of the Foundation for Polish Science (European Regional Development Fund)
 - Autonomous department of the Nicolaus Copernicus Astronomical Center of the Polish Academy of Sciences (NCAC PAS)
 - Located at the Warsaw University of Technology Campus downtown
- **NCAC PAS, www.camk.edu.pl**
 - >100 active researchers (mainly astronomy and gravitational waves)
 - Grad school
- **Funding:**
 - 38 MPLN (8.3 MEuro) for 5 years (until the end of 2023)
 - 0.9 MEur from Horizon 2020 Twinning until October 2023 (DarkWave)



ASTROCENT



AstroCeNT profile



Main objectives:

- Studies of the invisible Universe (gravitational waves, dark matter, neutrinos)
- Ultra-sensitive instruments to detect extremely faint signals
- Seismic sensors, modules of silicon photomultipliers (SiPMs)
- Big data collection and processing, quantum computing
- Applications in industry and medicine (e.g., PET)

Projects and partners

Main international collaborations:

- **DarkSide-20k, DEAP-3600**
- **Global Argon Dark Matter Collaboration (ARGO)**
- Advanced VIRGO/LIGO, Einstein Telescope
- Hyper-Kamiokande
- KM3Net

Key partners include:

- APC / CNRS
- European Gravitational Observatory
- Princeton University
- **Gran Sasso Science Institute**
- Warsaw University of Technology
- National Centre for Nuclear Research
- **McDonald Institute**
- **SNOLAB**
- **CERN Neutrino Platform**

DarkWave project (Horizon 2020 Twinning) and consortium coordinated by NCAC PAS:



DarkWave project

Main objectives:

- Direct dark matter detection:
 - DarkSide-20k construction
 - Technologies for future detectors (radiopure SiPMs, integrated electronics and digital readout SiPMs)
 - Scale-up of light collection schemes (wavelength shifters)
- **Synergies** with other physics areas:
 - Neutrino detectors (wavelength shifters)
 - Gravitational wave detection (seismic sensors)
 - Neutrinoless double beta decay (isotopic enrichment)

Support for this conference:

- 7 travel grants for international students
- Rental, promotional and admin costs



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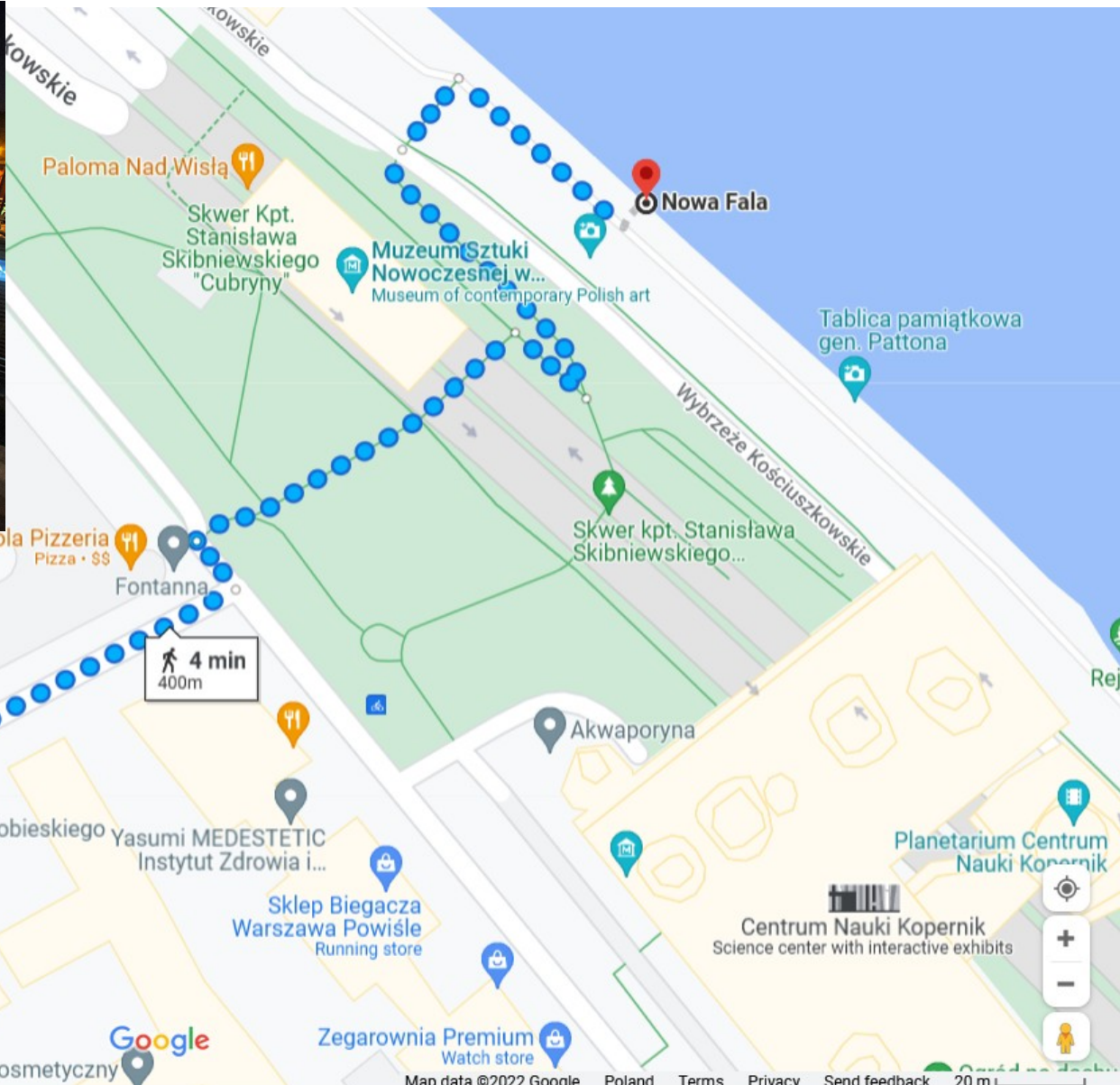


LIDINE 2022 highlights

- First public presentation of the recent DarkSide-50 results (Masato Kimura's talk)
- Dedicated session on light yield stability in large detectors (chair: Andrzej Szelc)
- Announcement from the ECFA noble liquid detector working group (new in the schedule)
- Best poster competition for students
- Round table discussions:
 - New technologies, ideas, R&D priorities (Vicente Pesudo)
 - Scale up challenges (Andrii Terliuk)
- Chance to finally interact in person ...

Welcome reception

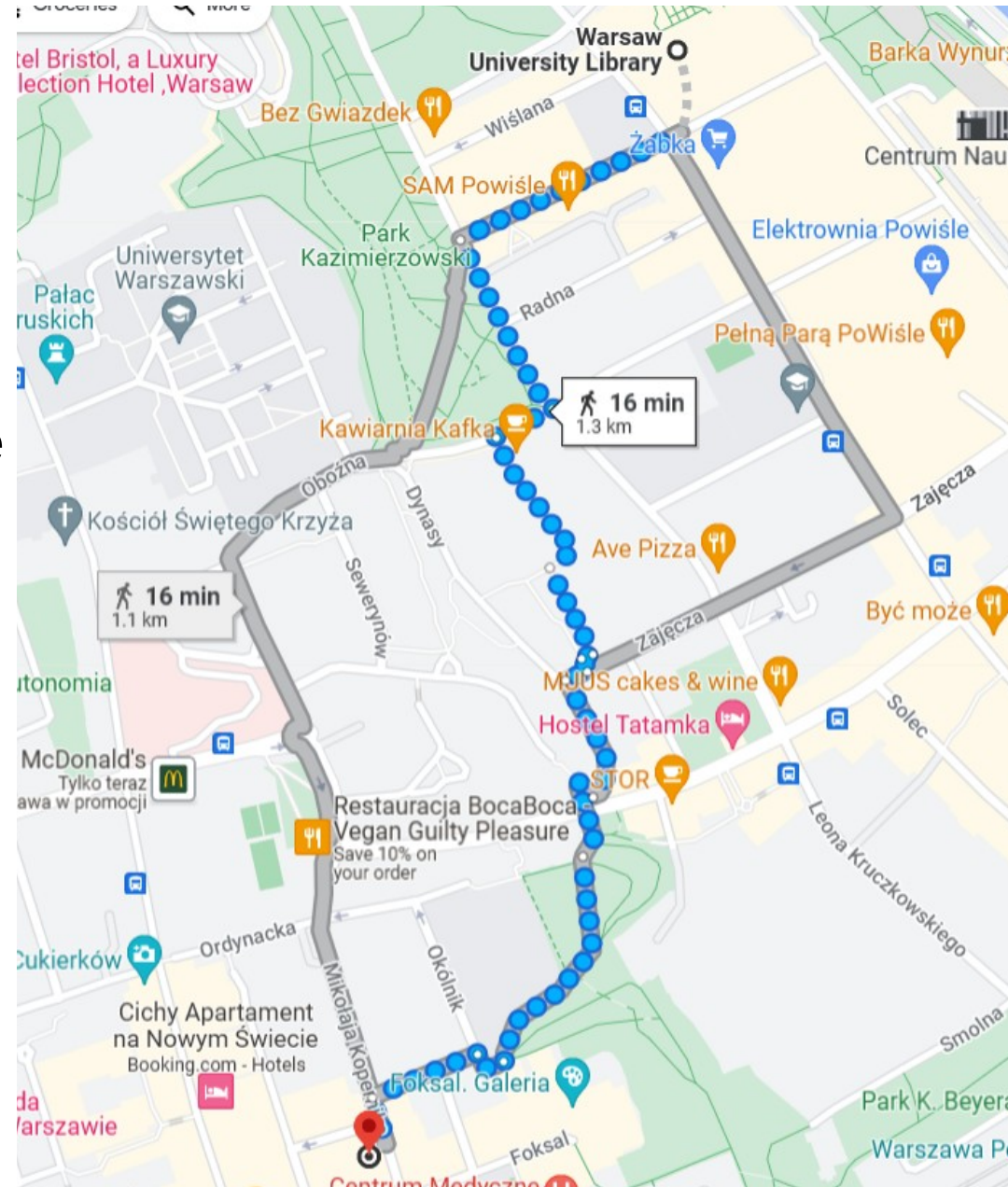
<https://facebook.com/PrzystanNowaFala>

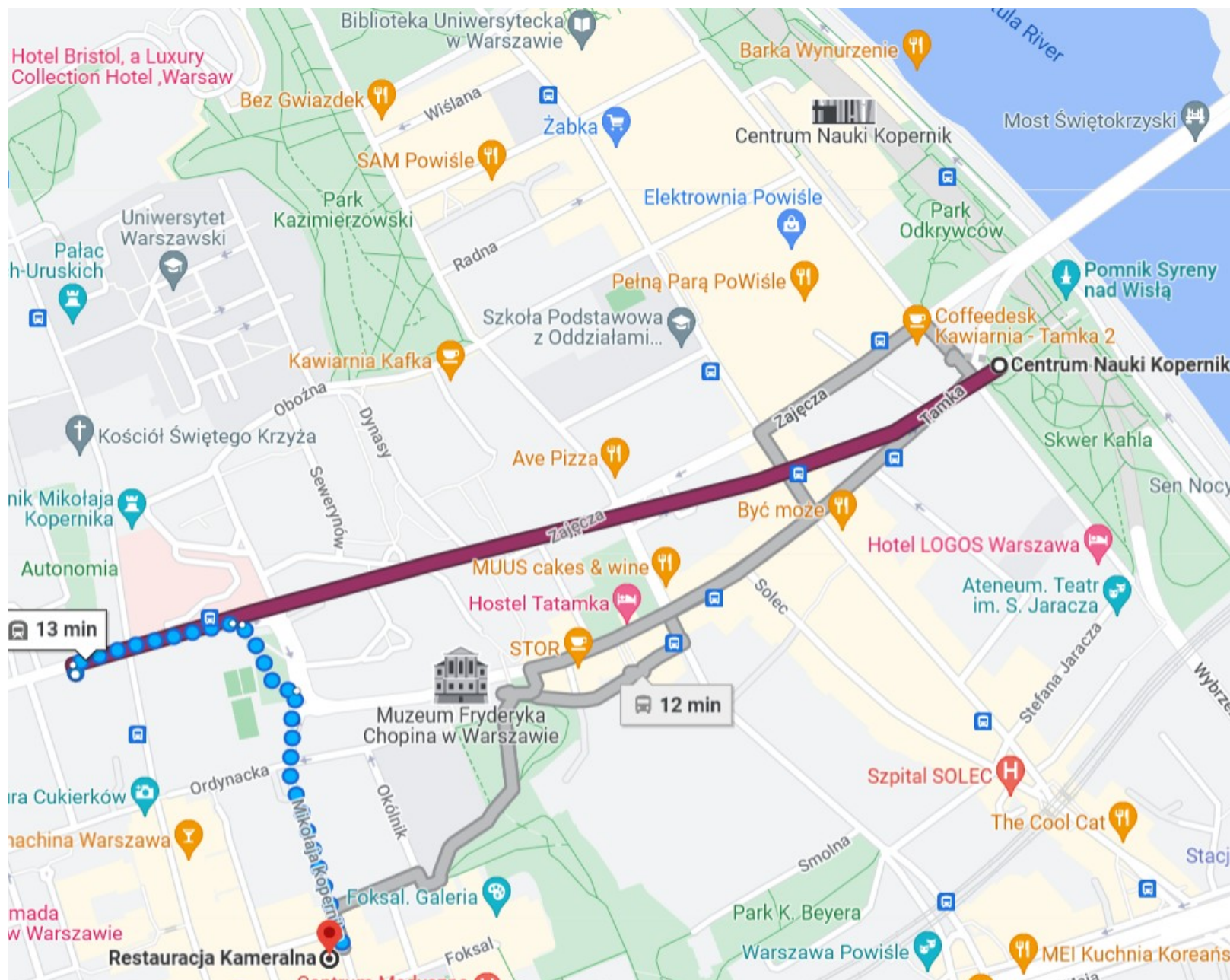


At Przystan Nowa Fala. Starting today at 5:30pm, shortly after the last session.

Conference dinner

- Kameralna Restaurant, ul.Kopernika 3
- At 7 pm, tomorrow
- Access:
 - ~15-20 minutes walking distance (scenic!)
 - Accessible also via public transit (this Thursday public transit in Warsaw is free!)





Alternatively, short walk from subway “Nowy Świat-Uniwersytet”

Acknowledgements

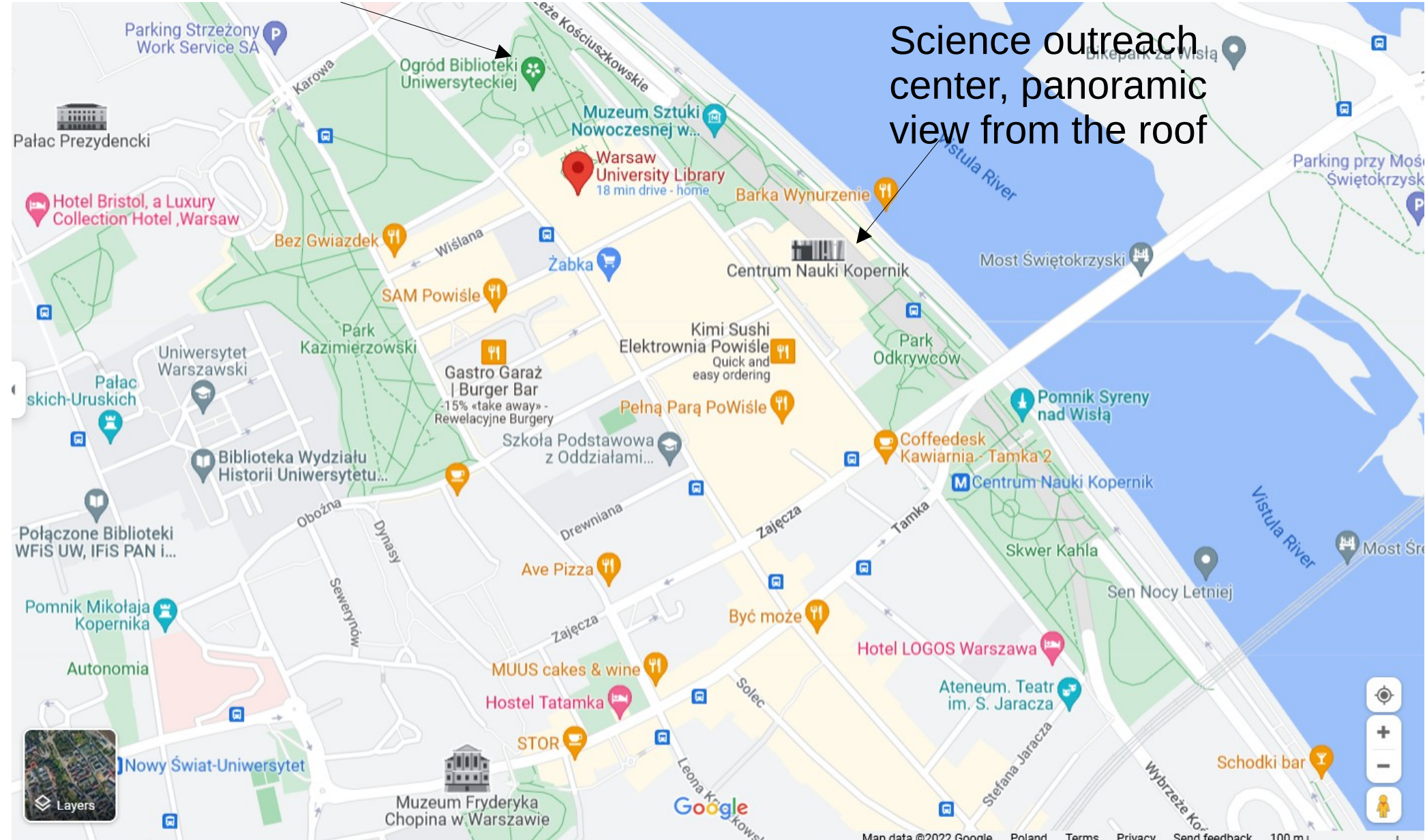
Sponsorship:  **TECHNO SOLUTIONS**
solutions
for
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Patronage:  **NCBR**
National Centre for Research
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Nearby attractions

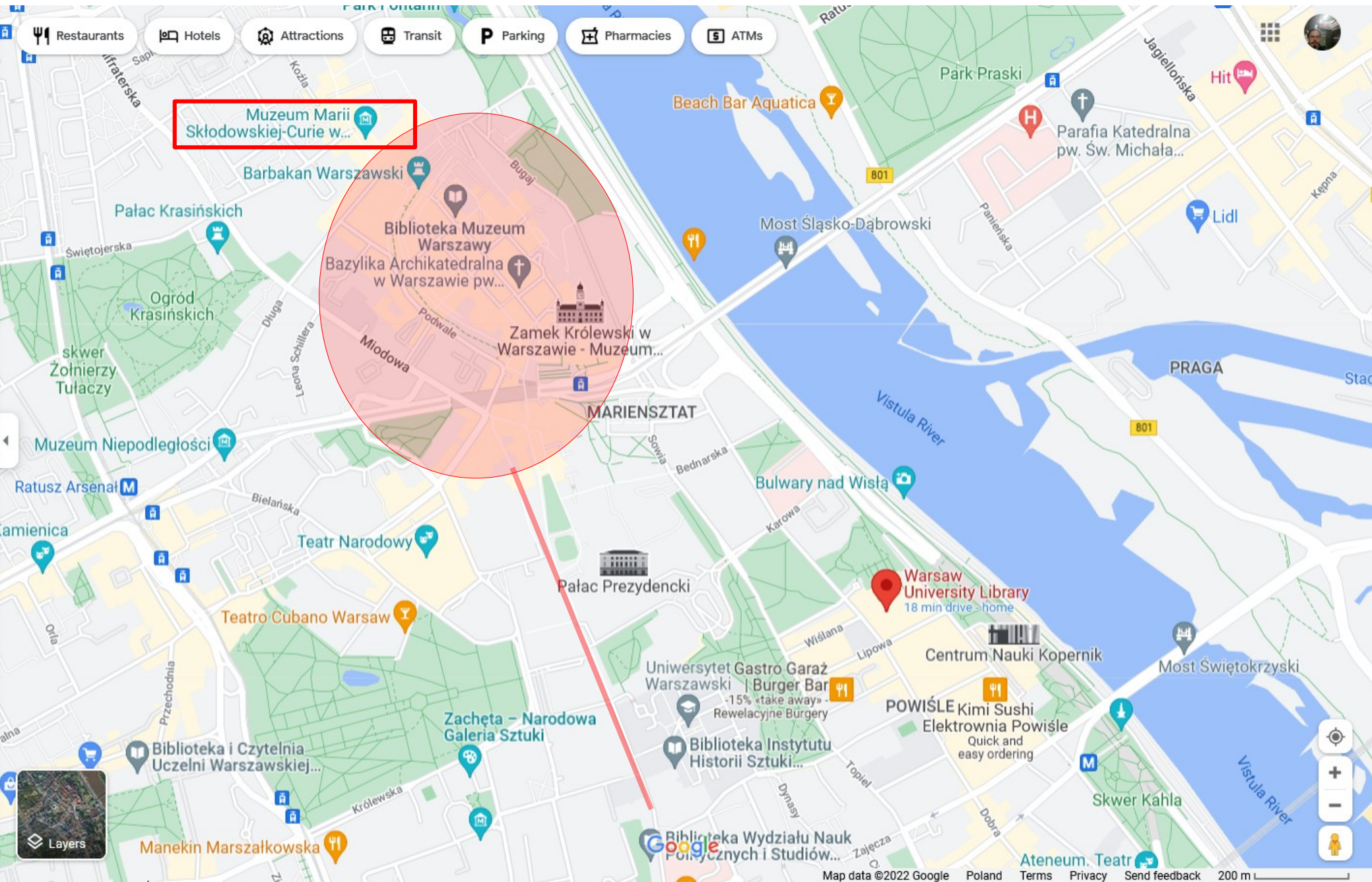
Rooftop gardens

Science outreach center, panoramic view from the roof



Chopin museum

Warsaw Old Town



Thank you!

