



**KERETPROGRAM  
2021-2027**



NEMZETI  
KUTATÁSI, FEJLESZTÉSI  
ÉS INNOVÁCIÓS HIVATAL

# A BME FIEK Horizon Europe- részvételt támogató szolgáltatásai – nemzetközi láthatóság

**NKFIH Horizont Európa Konzorciumépítő workshop 2022. november 15.**

**dr. Schenk Borbála, BME FIEK vezető európai pályázati tanácsadó,**

**BME Competence Map szerkesztő**

# Miben lehet szüksége támogatásra a kutatóknak a Horizon Europe programban?

1. Speciális logikájú pályázatok – nem elég a kiváló tudományos koncepció
2. Komplex pályázati felhívások – új stratégia szükséges a nemzetközi láthatósághoz, partnerkereséshez
3. Rengeteg információ – kutatók számára a leginkább lényeges kiszűrése
4. Évente több száz pályázat – kutatók számára a leginkább alkalmas megtalálása
5. Új kutatási trendek magabiztos ismerete (pl. Open Science, adatmenedzsment, co-creation)



# BME FIEK Horizon Europe támogatási portfóliójának elemei



## Az ötlettől a pályázat beadásáig

- Megfelelő pályázati forma és felhívás kiválasztása
- Felhívás értelmezése
- **Partnerkeresés, konzorciumépítés**
- Pályázati koncepció kialakítása
- Pályázat minőségbiztosítása, írása

## Tájékoztatás

- Honlap + Teams
- **Kutatói konzultációk**
- Kari, tanszéki tájékoztatók, események
- Rendszeres vezetői tájékoztatók
- Meghívások (pl. Doktorandusz Szövetség, EELISA)

## Képzés

**Nemzetközi láthatóság növelése**

**Szervezet felkészítése HE-követelményekre**

**Munkaprogramok alakításában való részvétel támogatása**

# Kompetenciaterkép Horizon Europe keresőszavakkal

The screenshot displays the BME Competence Map website. At the top, there are navigation links for 'Introduction', 'Research Groups', and 'Researchers'. The main header features the BME logo and the text 'BME COMPETENCE MAP'. Below this is a search bar with fields for 'Name', 'All content', and 'Research area', and a 'Search' button. A dropdown menu is open, showing a list of 'Horizon Europe Keyword' options including: [none], Advanced materials, Artificial Intelligence and Robotics, Batteries, CCAM, Circular economy, Cities and communities, Clean and healthy air, water and soil, Clean, sustainable, secure and competitive energy supply, Climate change mitigation and adaptation, Cloud and edge technologies, Democratic governance, Disaster resilient physical and digital infrastructures, Energy efficient buildings, European Green Deal, Green social innovations, Health technologies, new tools and solutions, Hydrogen, and Inclusive society. Below the search bar, there are statistics: '140 research groups' and '382 researcher profiles'. The background of the website features images of people in a laboratory and a group of people standing in front of a building.

<http://competence.bme.hu>

**Feltöltjük, fejlesztjük,  
promotáljuk**

BME FIEK Horizon Europe részvételt támogató szolgáltatások | NKFIH Horizont Európa konzorciumépítő workshop | 2022.11.15.

This section is titled 'Introduction of the Research Group'. It contains text describing the BME GIK Quantitative Social and Management Sciences Research Center's commitment to addressing challenges in social and management sciences through the use of novel, quantitative methods. It also lists 'ACHIEVEMENTS' including publications, awards, journals, projects, industry relations, and conferences.

ACHIEVEMENTS: PUBLICATIONS, AWARDS, JOURNALS, PROJECTS, INDUSTRY RELATIONS, CONFERENCES

- Postdoctoral research grant of Csaba Szendrői, titled "Crowd innovation, digital workforce and intellectual property rights", 2021.
- NKFI Science NET midsize Summer grant of Robert Szörgyei for his paper "Disruptive Products on Platforms"
- IQMBS is a research center with postdocs hired from the European Union Job Market.

**BME  
KUTATÓI  
PITCHFELVÉTEL  
2022. ŐSZ**

41 angol nyelvű  
kutatócsoport-  
bemutató videó



AZ NKFI ALAPBÓL  
MEGVALÓSULÓ  
PROJEKT

[https://www.youtube.com/playlist?list=PLM2rgmv2VW11Hba\\_oTUi8cu6SbvcFJTLn](https://www.youtube.com/playlist?list=PLM2rgmv2VW11Hba_oTUi8cu6SbvcFJTLn)

Meet Budapest University of Technology and Economics research groups!

The BME Combustion Research Group has a principal focus on **#combustion**, especially on **#renewable** liquid and gaseous **#fuels**. They also have expertise in solving industrial problems with **#thermal** modelling and simulations. Their results have a wide range of industry applications from **#wind #turbines** and **#space** technology to **#medical** research.

"Our most notable achievement is a mixture temperature controlled combustion with more than 50% NOx emission reduction compared to the state-of-the-art solutions without compromising the concentration of other pollutants." - says the leader of the research group **Viktor Józsa**

The BME Combustion Research Group is interested in Horizon Europe collaboration, especially in the fields of Clean, sustainable, secure and competitive **#energy** supply, **#climatechange** mitigation and adaptation, **#hydrogen** and **#renewableenergy**.

For their detailed professional profile:  
watch their research pitch video at <https://lnkd.in/dHtErQx5>  
visit their profile page on the BME Competence Map: <https://lnkd.in/dsiNrSA>

**#BMECompetenceMap #MeetBMEResearchers #horizoneurope #ExpertiseOffer #BMECombustionResearchGroup #matchmaking #engineering #FacultyofMechanicalEngineering**

Imre Norbert Orbulov Csaba János Hős

**BME Combustion Research Group**  
youtube.com

**Major achievements:**

- Mixture temperature-controlled combustion:
  - More than 50% NOx advantage to state-of-the-art
  - distributed combustion without dilution
  - simulation
- Detailed analysis of sprays
- Patent: combustion control (soon PCT)

# Findable, Accessible and Reusable

**DEPARTMENT OF POLYMER ENGINEERING, POLYMER COMPOSITES RESEARCH GROUP**  
WOULD LIKE TO JOIN A CONSORTIUM FOR HORIZON CL4-2022-RESILIENCE-01-11:  
ADVANCED LIGHTWEIGHT MATERIALS FOR ENERGY EFFICIENT STRUCTURES

We can contribute to the following tasks as described in the Topic:  
Developing new sustainable and high performance lightweight materials and associated novel manufacturing techniques.

**Our approach:**  
We developed sugar-based bioepoxy resins with high glass transition temperature which are suitable for high temperature use, e.g. carbon fibre reinforced composites for aircraft applications. We elaborated a novel combination fibre treatment method for carbon fibres which increases the thermal stability, the performance of the fibres, and leads to increased adhesion and consequently better mechanical properties in fibre reinforced composites. We developed flame-retarded self-reinforced thermoplastic PP and PA composites which are designed for recycling as the matrix and the fibre reinforcement are from the same polymer. In addition, we prepared advanced multifunctional carbon fibre reinforced composites with merging capabilities for aircraft structural parts and composite health-monitoring systems using the carbon fibre reinforcements in composites.

**Polymer Composites Research Group**  
Our activity in the field of polymer composites scales from the tailored synthesis of new monomers, additives and fibre treatments, through a wide variety of advanced composites preparation (e.g. 1-81M, autoclave, vacuum infusion, wet compression) and testing methods, to the development of various multifunctional composites (e.g. hybrid reinforcement, embedded sensors, energy capabilities, high electrical and/or thermal conductivity, biodegradable all-bio composites, flame retardant polymers).

**COMPETENCES AND REFERENCES RELEVANT TO THE TOPIC**

- More than 1000 publications in the field of polymer science and engineering [Link to publications list](#)
- ISO certified laboratory for polymer processing and analysis, including compounding, film and foam extrusion, electrospinning, 3D printing, injection molding; in-line applicable analytical tools (Fluorescence, NIR spectroscopy, machine vision); thermogravimetry, rheology, static and dynamic mechanical testing, flame retardancy, stability, ageing, SEM, AFM, TEM; prototyping, simulation.
- National projects with the main actors of the Hungarian plastic industry (including transport industry, electronic and automotive suppliers)
- Experience in European projects (e.g. W2Plastics EU FP7 project on the analysis and recycling of mixed polymer wastes; EU FP7 projects with Airbus Space and Defense as topic manager in the field of carbon nanofibres for composites and with Dassault Aviation on bioepoxy resins in the frame of Clean Sky II)
- Qualified project management staff at university level

**BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS**  
With its regular high-ranking positions (between 200 and 600) BME is among the top universities (2-6%) globally. At the university's 8 faculties and 76 departments, there are 1,200 lecturers teaching 5,000 subjects and 10,000 courses each semester. In the H2020 Framework Programme BME has ranked #2 among the Hungarian institutions (67 funded projects). The University is an active member of the European Engineering Learning Innovation and Science Alliance (EELISA) European University, the ESCAR association of universities of science and technology and the European University Association. [University website](#)

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13 September 2022 - 31 March 2023

**Clean Energy Transition Partnership (CETPartnership)**

# BME FIEK Horizon Europe legfontosabb elemek

Csapatmunka, vezetői támogatás,  
NKFIH EIÖ pályázat,  
Horizon rásegítő pályázat



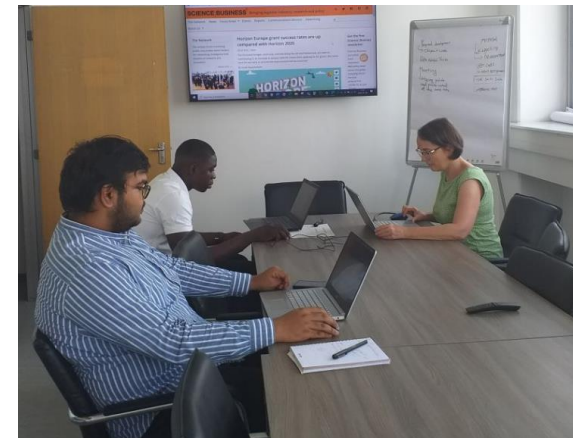
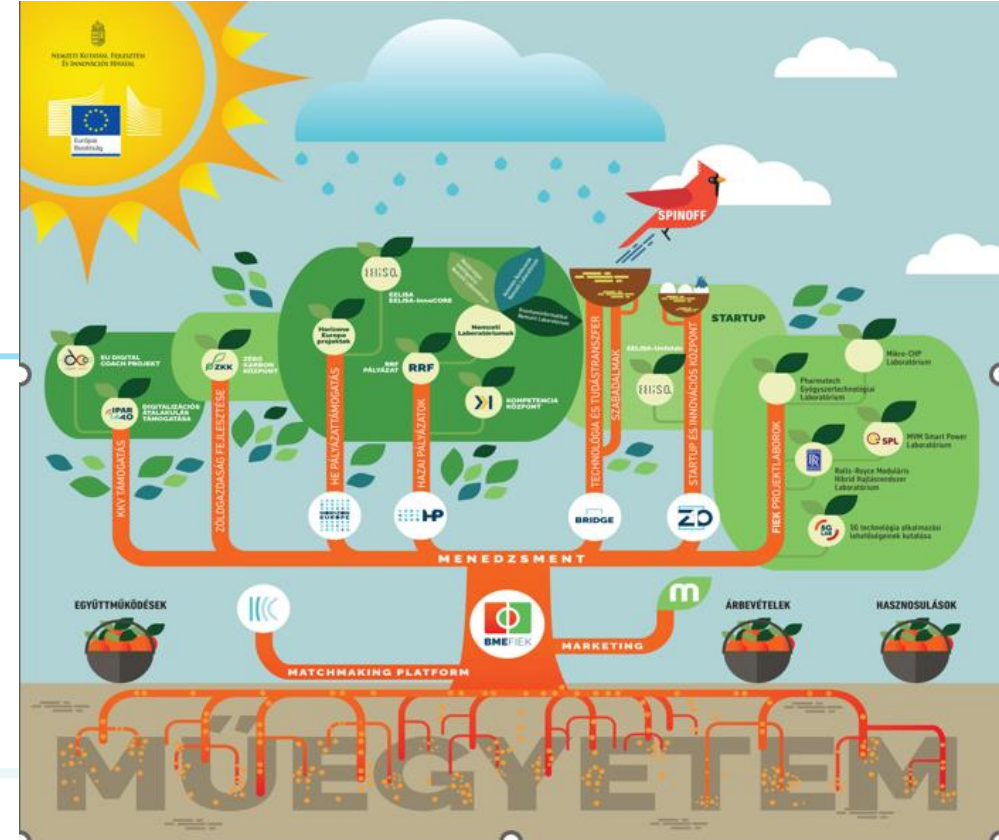
**Dr. Borbála Schenk**  
Chief European research  
Funding Advisor



**Anjan Kumar Das**  
European Research Funding  
Advisor Trainee



**Emmanuel Godwin Bandawa**  
European Research Funding  
Advisor Trainee





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# Köszönöm a figyelmet!



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AZ NKFI ALAPBÓL  
MEGVALÓSULÓ  
PROJEKT

dr. Schenk Borbála

vezető európai pályázati tanácsadó, BME Competence Map szerkesztő

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BME FIEK Horizon Europe részvételt támogató szolgáltatások | NKFIH Horizont Európa konzorciumépítő workshop |

2022.11.15.