



**National Technical University “Kharkiv Polytechnic Institute” (Kharkiv, Ukraine)**

**Cross-Cultural Communication and Foreign Language Department**

**Buckinghamshire New University (Buckinghamshire, the United Kingdom)**

**Business and Law School**

**AN INNOVATIVE MODEL OF RESEARCH PROJECTS**

**AIMED AT THE INTEGRATION OF**

**UKRAINE INTO THE EUROPEAN SCIENTIFIC SPACE**

**An Annual International PhD Conference**

**(April 24, 2025)**

**PROGRAMME**

**Kharkiv, 2025**

## Opening ceremony

### Key speakers:

1. **Tetyana Sergeyeva** (Professor, DSc, National Technical University “Kharkiv Polytechnic Institute”, Kharkiv, Ukraine). Welcoming Speech.
2. **Dorin Festeu** (Professor, Buckinghamshire New University, Business and Law School Director, Buckinghamshire, the UK). Welcoming Speech.
3. **Mathew Tong** (Professor, senior lecturer, Business and Law School, Buckinghamshire New University, Buckinghamshire, the UK)

### Participants of National Technical University “Kharkiv Polytechnic Institute”, Kharkiv, Ukraine:

1. **Yuriy Babay**. USING ARTIFICIAL INTELLIGENCE IN RESEARCH AND IMPROVEMENT OF THE TECHNOLOGY OF ROLL FORMING OF BENT 3D-TYPE PROFILES
2. **Valentyn Vovk**. ENSURING ACCURACY IN DESIGN OF LAYOUTS & USE OF MOBILE PORTABLE MACHINES WITH AN AGGREGATE-MODULAR CONSTRUCTION
3. **Myroslav Voropaiev**. THE IMPORTANCE OF THE MODERN METHODS OF METROLOGICAL CONTROL OF PRODUCTS
4. **Vadym Liapunov**. NATURAL & SYNTHETIC ANTIOXIDANTS AND THEIR PROSPECTIVE APPLICATION IN LIQUID OIL-BASED MARINADES.
5. **Serhii Holenko**. STUDY OF THE INFLUENCE OF HYDRODYNAMIC LOADS ON THE PERFORMANCE OF HYDRAULIC TRANSMISSIONS
6. **Kyrylo Shoful**. IMPROVING SURFACE QUALITY OF POLISHED PARTS WITH CLEANING AGENTS AND LUBRICATING AND COOLING FLUIDS
7. **Mykyta Sabeilnikov**. INNOVATIVE APPROACHES TO ENVIRONMENTAL MANAGEMENT IN SUSTAINABLE DEVELOPMENT
8. **Pavlo Getman**. OBTAINING OF CO<sub>2</sub> EXTRACTS FROM SPICES TO REPLACE OLEORESINS AND ESSENTIAL OILS IN THE MEAT PROCESSING INDUSTRY
9. **Stanislav Hlushko**. STUDY OF ENERGY EFFICIENCY OF PULSE HIGH-SPEED MILLING CONSIDERING THE ATOMIC PROCESS
10. **Vladyslav Harkusha**. FINITE ELEMENT METHOD CALCULATIONS OF STATIC STRESS POWERED BY MACHINE LEARNING METHODS
11. **Viacheslav Barannikov**. STUDY OF THE KINETICS OF THICKNESS FORMATION AND PHASE COMPOSITION OF COATINGS ON DEFORMABLE ALUMINIUM ALLOYS DURING MICROARC OXIDATION
12. **Volodymyr Bobrov**. INFLUENCE OF THE CHEMICAL COMPOSITION AND MICROSTRUCTURE OF ALUMINUM ALLOYS ON THE CHARACTERISTICS OF COATINGS OBTAINED BY THE MICROARC OXIDATION METHOD
13. **Yevhenii Ippolitov**. CYBERSECURITY AS A STRATEGIC PRIORITY FOR UKRAINE'S INTEGRATION INTO THE EU DIGITAL SPACE
14. **Vasyl Oliinyk**. METHODS FOR MONITORING MECHANICAL LOADS IN METAL PRODUCTS
15. **Vadym Tkachenko**. NON-DESTRUCTIVE TESTING METHODS OF METAL PRODUCTS STRUCTURE

**BREAK (30 minutes)**

16. **Ievgen Pogartsev.** PRIORITY IN TEAM VALUATION DURING WARTIME CONDITIONS
17. **Oleksandr Nesterenko.** PROBLEM OF INDUSTRIAL INJURIES IN UKRAINE
18. **Roman Onatskyi.** EARLY RESEARCH RESULTS ON THE STRENGTH ASSESSMENT OF CYLINDRICAL SHELLS WITH DENTS USING AN AI-BASED APPROACH
19. **Oksana Lashchenko.** ARTIFICIAL NEURAL NETWORKS FOR NAVIGATION SYSTEMS: CHALLENGES, TASKS AND RESEARCHES
20. **Kostiantyn Barbin.** COMPUTATIONAL MODELING OF THE DEFORMATION OF THE “BONE–IMPLANT–PROSTHESIS” SYSTEM
21. **Kalnytskyi Maksym.** ELECTROMAGNETIC-ACOUSTIC CONVERTER WITH COMBINED MAGNETIZATION
22. **Oleksii Skliarov.** EVALUATING DRIVER SATISFACTION WITH URBAN INTERSECTION TRAFFIC MANAGEMENT AND SOLVING TRAFFIC LIGHT CONFIGURATION ISSUES THROUGH CASUAL GAMING ENGAGEMENT
23. **Anton Khodysko.** ANALYSIS OF AUTONOMOUS SELF-PROPELLED PLATFORMS WITH HYBRID ENERGY SYSTEMS
24. **Roman Cherevatenko.** ANALYSIS OF DESIGN FEATURES OF AUTONOMOUS SELF-PROPELLED PLATFORMS WITH HYBRID TRANSMISSION
25. **Dmytro Smirnov.** THEORETICAL ASPECTS OF OBTAINING RADIATION-RESISTANT CEMENTS
26. **Andrii Markov.** COMPARATIVE ANALYSIS OF ERP-ENABLED MAINTENANCE MANAGEMENT AT THERMAL AND NUCLEAR POWER PLANTS IN UKRAINE AND WORLD-WIDE
27. **Bogdan Batsayev.** WAYS OF OBTAINING NITRIC ACID WITH A HIGHER CONCENTRATION
28. **Yevhen Yekymov.** RESEARCH ON THE TECHNOLOGY OF PRODUCING POLYMER COMPOSITION BASED ON RECYCLED POLYAMIDES AND POLYPHTHALAMIDE WITH ENHANCED PROPERTIES
29. **Andriy Kitchenko.** THEORETICAL ASPECTS OF PRODUCING REFRACTORY CEMENT BASED ON CALCIUM ALUMINATES AND TITANATES
30. **Vitalii Kostyrko.** REFRACTORY CEMENT BASED ON BARIUM ALUMINATES AND MAGNESIUM SPINEL
31. **Oleksandr Hrebeniuk.** SYNTHESIS AND PROPERTIES OF ULTRA-DISPERSED FERRITES; RADIO-ABSORBING COMPOSITE MATERIALS BASED ON THEM
32. **Anastasiia Shcholokova.** COMPOSITE COATINGS FOR CORROSION PROTECTION OF AISI 304 STAINLESS STEEL
33. **Kyrylo Zolotarov.** SULPHATE-RESISTANT BARIUM-CONTAINING PORTLAND CEMENT FOR CEMENTING OIL AND GAS WELLS
34. **Dmytro Nosalskyi.** CURRENT STATE OF THE SULFURIC ACID INDUSTRY IN UKRAINE
35. **Oleksii Servetnyk.** JUSTIFICATION OF THE RATIONAL USE OF SECONDARY RAW MATERIALS IN BREWING
36. **Yaroslav Ron.** DEVELOPMENT OF ORGANIZATIONAL AND ECONOMIC FOUNDATIONS FOR MANAGING INNOVATIVE MARKETING IN THE SERVICE SECTOR
37. **Denis Chubenko.** RATIONALE FOR THE STABILIZATION TECHNOLOGY OF GLUTEN-FREE BEER USING PLANT EXTRACT