

Twinning project  
“Supporting inter-sectoral collaboration possibilities between Research and Industry”

List of proposed Pitch presentations for Matchmaking event on March 14<sup>th</sup>, 2023

Presentation No	Industry/Field	Title/description of the invention/service	Organisation	Name, Surname
1	Agriculture	Vibratory technologic processes of production and treatment of friable materials (Mining, developing, chemical etc. industries): Used for dry as well as wet friable materials when the jam of the material in the bunker mouth and its adhesion on the walls	LEPL Rapiel Dvali Institute of Machine Mechanics	Viktor Zviadauri
2	Agriculture and Biomedicine	Development of equipment for Jerusalem artichoke processing <ul style="list-style-type: none"> <li>Using Jerusalem artichoke to improve soil properties by incorporating biomass into the soil;</li> <li>Improving the chemical properties of Jerusalem artichoke bulbs for the treatment of people suffering from diabetes, vision impairment and iron deficiency anemia;</li> </ul> Jerusalem artichoke agro-techniques and adaptation to local conditions in light of climate change.	Tsotne Mirtskhulava Water Management Institute of Georgian Technical University	Givi Gavardashvili
3	Agriculture/Mechanical Engineering	Machines for the rehabilitation of agricultural land: <ul style="list-style-type: none"> <li>machine for cutting and chopping vegetation was developed</li> <li>model of a rotary cultivator for crushing the root system of plants in the soil has been developed</li> <li>planting of intensive gardens, a model ridge forming machine was developed</li> </ul>	LePL Rapiel Dvali Institute of Machine Mechanics	Zaza Makharoblidze
4	Biotechnology	Advancing products by upgrading and modernizing institute and their production: <ul style="list-style-type: none"> <li>collaboration in establishment the state-of-art facility for bioactive supplement research, production and marketing.</li> </ul>	Bakhutashvili Institute of Medical Biotechnology (IMB) / TSMU	Giorgi Kharebava
5	Biotechnology/Medicine	Innovative technology for obtaining biofunctional fiber from Kolkhic flax with antibacterial and antifungal action.	Tbilisi State Medical University Department of	Lamzira Ebralidze

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		The obtained fiber will be used for the production of antimicrobial medical textiles (cotton, mask, gauze, cosmetic napkins, surgical sutures, medical bandages, etc.).	Pharmaceutical Technology	
6	Construction, geological exploration, mining-geological, mechanical engineering	Development of different types of diamond cutting tools:  circular saw blades, core drills, grinding and polishing pads for processing concrete, reinforced concrete, asphalts-concrete and natural stones; artificial diamond powder	Scientific Center of Diamonds and Composite Materials of the Technical University of Georgia	Nika Loladze
7	Food production	An innovative, fast, cheap and effective DNA diagnostic technology for food ingredients and allergens. Food quality and safety assessment, correct labeling and consumer health protection.	Ilia State University	Nelly Datukishvili
8	Machine mechanics/Railway transport	improvement of the railway transport operational properties and their further implementtion	LEPL RAPIEL DVALI INSTITUTE OF MACHINE MECHANICS	Giorgi Tumanishvili
9	Mathematics	Mathematics as a Service: <ul style="list-style-type: none"> <li>New Finetuned Models Optimized Industrial process</li> <li>New Finetuned Models Optimized Industrial process propriatery code</li> </ul>	Ilia Vekua Institute of Applied f laboratory „Mathematics (VIAM) of TSU	Giorgi Rukhaia
10	Mechanical Engineering	The mechanism for lifting and lowering people with disabilities on the stairs	LEPL Rapiel Dvali Institute of Machine Mechanics	Vladimer Margvelashvili
11	Mechanical Engineering	Radial-forging Machine: machines can produce products with accurate dimensions and a clean surface at minimal cost	LEPL RAPIEL DVALI INSTITUTE OF MACHINE MECHANICS	Slava Mebonia
12	Mining	Underground coal gasification for Georgian deposits: <ul style="list-style-type: none"> <li>Development of underground gasification technology for Georgian deposits</li> <li>Production “clean” energy</li> </ul>	LEPL Grigol Tsulukidze Mining Institute	Davit Khomeriki Nika Bochorishvili

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13	Mining – Protection from Explosions	Automated System for Protection from explosions: Laboratory Research are completed, Prototype is tested in Tunnels of Mining Institute	LEPL Grigol Tsulukidze Mining Institute	Mikheil Chikhradze
14	Paper industry	Bactericidal Wrapping Paper: <ul style="list-style-type: none"> <li>Simple and cheap technology to produce bactericidal wrapping paper with improved surface properties</li> <li>The technology is based on introduction of zeolite material enriched with biologically active metals into the paper web</li> </ul>	Petre Melikishvili Institute of Physical & Organic Chemistry, Ivane Javakhishvili Tbilisi State University	Vladimer Tsitsishvili
15	Pharmacology	Development of peptide-based antibiotics against resistant microbes: <ul style="list-style-type: none"> <li><i>In vivo</i> testing of <i>de novo</i> designed and <i>in vitro</i> tested peptides</li> <li>Clinical trials on peptides, selected during <i>in vivo</i> testing</li> </ul>	I.Beritashvili Center of Experimental Biomedicine	Malak Pirtskhalava
16	Pharmacy	Inositols and epileptogenesis prevention: <ul style="list-style-type: none"> <li>data and ideas for possible new treatment to prevent epileptogenesis process</li> </ul>	I.Beritashvili Center of Experimental Biomedicine and Ilia State University	Revaz Solomonias
17	Pharmacy	Prototypes of 5 different types of balneological products developed by the research team. Proposed balneological products have anti-inflammatory, wound-healing properties that are recommended to use in balneological practice.	Tbilisi State Medical University Department of Pharmaceutical Technology	Lasha Bakuridze
18	Renewable Energy	Study of the problems of transportation of "green" and "blue" hydrogen and mixture of hydrogen with natural gas through the Pipeline Routes and its safety problems; Study of wind energy potential and possibilities its development on the territory of Georgia and hydrogen production using wind energy	Ilia Vekua Institute of Applied f laboratory „Mathematics (VIAM) of TSU	Teimuraz Davitashvili Giorgi Rukhaia
19	Renewable Energy	Nanostructured layers to be tested in crystalline Si solar cell technology	Ilia State University	Avto Tavkhelidze
20	Renewable Energy	Plasmonic Nanoparticle-Based Solar Concentrator	Institute of Cybernetics Georgian Technical University	Gia Petriashvili

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21	Steel Industry Battery Industry	New hydro electrometallurgical technology for processing of manganese oxide raw materials	R.Agladze Institute of Inorganic Chemistry and Electrochemistry Ivane Javakhishvili Tbilisi State University	Gigla Tsurtsunia