



Urban Innovation and Entrepreneurship Competition

Padova 2022 | Third Edition

Final Competition and Awarding Ceremony

Organised by the Guangzhou International
Sister-City Universities Alliance
Hosted by the University of Padova, Italy

Programme

15 November 2022
9:00 – 13:00

Botanical Garden of
University of Padova



1222 · 2022
800
ANNI



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



2022 URBAN INNOVATION AND ENTREPRENEURSHIP FINAL COMPETITION

Organized: Secretariat Office, the Alliance of Guangzhou International Sister-City Universities (GISU)

Hosted: University of Padova, Italy

Major Event Location: Botanical Garden of the University of Padova, Via Orto Botanico, 15, Padova (Italy).

Chinese Location: Lecture Hall, West Administration Building, Guangzhou University, Guangzhou Higher Education Mega Center, Guangzhou (P.R. China).

Zoom link: <https://unipd.zoom.us/j/88663224532>

WELCOME ADDRESSES

9:00 – 9:05 a.m. CET

Prof. Fedeli

Vice Rector of the Third Mission and Regional Relations, University of Padova, Italy

9:05 – 9:10 a.m. CET

Dr. Cacciavillani

City of Padova, Italy

9:10 – 9:15 a.m. CET

Consul General De Parolis

Consulate General of Italy in Guangzhou – Canton

9:15 – 9:20 a.m. CET

Consul General Liu

Consulate General of the People's Republic of China – Milan

9:20 – 9:25 a.m. CET

Prof. Wei

President, Guangzhou University, P.R. China
Chair of Guangzhou International Sister-City Universities Alliance, GISU

9:25 – 9:30 a.m. CET

Prof. Basso
Vice Rector for International Relations,
University of Padova, Italy

9:30 – 9:35 a.m. CET

Dr. Scuttari
Director General, University of Padova, Italy

COMPETITION INTRODUCTIONS

9:35 – 9:45 a.m. CET

Mr. Farr
Director of International Programs, Secretariat
Office, GISU

9:45 – 9:55 a.m. CET

Prof. Dughiero
Vice Rector for Innovation and Business
Relations, University of Padova, Italy

CONCEPT TEAM PRESENTATIONS

UNIVERSITY

PROJECT TITLE

9:55 – 10:05 a.m. CET

University of Coimbra

SAFE-Pack

10:05 – 10:15 a.m. CET

University of Coimbra

ReneWaste

CONCEPT TEAM PRESENTATIONS	UNIVERSITY	PROJECT TITLE
10:15 - 10:25 a.m. CET	Guangzhou University	Huiqian BG320 - An Innovative and Economical Multi-Service Detection Submersible
10:25 - 10:35 a.m. CET	Guangzhou University	Concrete Strengthening Agent for Sponge City
10:35 - 10:45 a.m. CET	Guangzhou University	UAV-Based Rapid Communication Deployment System
10:45 - 10:55 a.m. CET	Guangzhou University	New Process for the Production of High-Performance Aerogels
10:55 - 11:05 a.m. CET	University of Padova	DNA SWITCH Project
11:05 - 11:15 a.m. CET	Guangzhou University	Intelligent Integration of Contemporary Educational Systems
11:15 - 11:25 a.m. CET	Western Sydney University	VIRTUALIZON
11:25 - 11:35 a.m. CET	Guangzhou Medical University	Love, Sweet Mom

START-UP TEAM PRESENTATIONS	UNIVERSITY	PROJECT TITLE
11:35 – 11:45 a.m. CET	University of Zaragoza	Maximiliana
11:45 – 11:55 a.m. CET	Guangzhou University	STARITRON– AI+IP Authorized Accelerated Analog Chip Design
11:55 a.m. – 12:05 p.m. CET	Guangzhou University	FloatingLife to Sea
12:05 – 12:30 p.m. CET	BREAK Judging Panel Deliberations	
12:30 – 12:45 p.m. CET	Competition Winners Announced	
12:45 – 13:30 p.m. CET	BUFFET LUNCH	
14:00 p.m. CET	END OF EVENT	

FINAL COMPETITION AWARDS AND BONUSES

CONCEPT TEAMS

AWARDS	NUMBER	BONUS * all award money is subject to applicable taxes.
GOLD	1	100,000 RMB (or equivalent)
SILVER	2	50,000 RMB (or equivalent)
BRONZE	3	20,000 RMB (or equivalent)
OUTSTANDING MENTOR	6	5,000 RMB (or equivalent)

START-UP TEAMS

AWARDS	NUMBER	BONUS
GOLD	1	START CUBE AWARD <ul style="list-style-type: none">• Light acceleration (12 months of mentorship)• 12 one-to-one meeting to develop entrepreneur skills and to support the growth of the start-up with experts in several subjects: tax, legal, marketing, communication, etc.• A 30% discount with the R&D area (strategy, design and materials) The programme value is equivalent to 10,000 Euros. The prize is provided in consulting service.
SILVER	1	LE VILLAGE BY CRÉDIT AGRICOLE <ul style="list-style-type: none">• Inclusion in Le Village communication channels• Access to the Tribe platform (where news, events and opportunities for Start-ups are posted)• Attendance at 2 English-language webinars in 2023• Access to We Match (platform shared with other 43 Le Village, with an overview of 1200 Start-ups and 680 Corporates of the Le Village network)• Assistance in internationalisation thanks to the International Desk
BRONZE	1	LE VILLAGE BY CRÉDIT AGRICOLE <ul style="list-style-type: none">• Inclusion in Le Village communication channels• Access to the Tribe platform (where news, events and opportunities for Start-ups are posted)• Attendance at 2 English-language webinars in 2023• Access to We Match (platform shared with other 43 Le Village, with an overview of 1200 Start-ups and 680 Corporates of the Le Village network).

CONCEPT TEAMS

SAFE-PACK

Team members: Alexandre Jorge, Cristiana Bento, Mara Braga, Marisa Gaspar.

Mentor: Cristiana Bento, Alexandre Jorge

University: University of Coimbra

SAFE Pack is a project from the University of Coimbra, focused on the development of natural-based polymeric films to protect, preserve and extend the shelf life of fruits and vegetables, contributing to the reduction of food waste, while at the same time reducing the use of plastic packaging. The main objective of SAFE Pack is to develop sustainable systems that may extend the food shelf-life and at the same time will improve human health, by delivering antioxidants to the organism.

A project that uses natural materials, obtained from agro-food/forestry industry residues, instead of synthetic ones, which usually are non-renewable resources and present environmental impacts, contributing to the circular economy and improving the sustainability of the food sector. SAFE Pack films can be applied in two different ways: by direct application on fruits and vegetables or by the previous formation and drying of the films. The films are edible and present a barely noticeable flavour and smell. However, since they are biodegradable, if the consumer does not want to eat them, he can easily remove them by washing.

RENEWASTE

Team members: Irvylle Raimunda Mourão Cavalcante, Joel Alves Costa Filho, Luiz Felipe Magalhães Antunes de Almeida, Jônatas Augusto Manzolli, Mauro Pungo

Mentor: João Bigotte

University: University of Coimbra

Currently, the link between the parties involved in the buying and selling waste is a chain with no digital connection. Consequently, the main

obstacle in the negotiation process is the contacts' network disorganisation between sellers, transporters and those interested in reprocessing the raw material (buyers). The negotiation is done by telephone, e-mail or in person, which takes a lot of time and hinders the process that could be facilitated by digital means. Further, the transportation costs can be prohibitive, jeopardising the sale. Lastly, large amounts of

raw material need to be negotiated to make the waste selling rentable. At the end of the day, waste trading usually causes financial loss without a solid business strategy, which translates into low recycling rates. We believe that our idea is the key to connecting this operation effectively. We developed an MVP in the form of a partially functional Web App that, when completed, will act as a bridge between waste management companies that want to buy waste and retail companies that want to sell waste. The transaction process will be done through a collaborative marketplace. The recycling companies will be able to introduce inside

the web app their demand and the types of waste materials they want. Then, commercial sector entities (e.g., supermarkets, restaurants, universities, shopping centres, industries, etc.) will collaborate with different quantities of waste to meet the required demand. Later, the cost of transportation will be shared by all the companies involved in the transaction. This model solves the problem of the onerous cost of personal transportation and obtaining a substantial amount of waste and, consequently, makes the process profitable and sustainable.

HUIQIAN BG320 – AN INNOVATIVE AND ECONOMICAL MULTI-SERVICE DETECTION SUBMERSIBLE

Team members: Wengao Xie, Yixiao Zhang, Yongqiang Li, Huilan Huang, Jiaqiao Liang, Guowei Liu, Haoxiang Zhou, Siyi Li, Siying Liu, Zibo Zhu

Mentor: Bingcong Chen, Airong Liu

University: Guangzhou University

Huiqian BG020 Multifunctional Modular ROV for underwater detection has a modular bot framework which can be equipped with different auxiliary equipment and accessories to meet the demands of different detection scenarios. Equipped with the advanced shaftless propeller and the intelligent anti-disturbance algorithm devel-

oped by the Huiqian R&D team, it can resist the 4m/s water flow and maintain its stability when impacted by other objects. In addition, Huiqian BG series ROVs for underwater detection are equipped with the USV power supply auxiliary system, which completely solves the battery problem of insufficient endurance for ROVs in the market and achieves unlimited endurance in theory. So far, the program has won several prizes including the second prize in the national final of the 7th China International College Students' "Internet+," Innovation and Entrepreneurship Competition, the second

prize in the Guangdong “Community Entrepreneurship Cup,” Competition and the second prize in the 2021 Youth Talents International Innova-

tion and Entrepreneurship Competition.

CONCRETE STRENGTHENING AGENT FOR A SPONGE CITY

Team members: Weizhi Chen, Mingxi Wu, Liuxuan Wu

Mentor: Chujie Jiao, Xuefei Chen

University: Guangzhou University

In order to solve various problems in the use of pervious concrete materials, our team has developed a complete set of key technologies of pervious concrete, which cannot only ensure the permeability of pavement structure but also significantly enhance the structural

strength, effectively resolving the seemingly irreconcilable contradiction between permeability and strength. It is hoped that the new pervious concrete reinforcer can be used to improve the performance of existing materials, so that the pervious concrete can achieve higher strength and better environmental protection ability, and contribute to the construction of sponge city.

UAV-BASED RAPID COMMUNICATION DEPLOYMENT SYSTEM

Team members: Jinshan Huang, Jiaxin Yang, Wenjie Lin, Yu Tingyin, Yingtong Wang, Ziyang Zhang, Jingyi Zhong, Baihan Chen, Yang Wang, Yibin Chen

Mentor: Binsheng Xie

University: Guangzhou University

It is a rapid communication deployment system based on an intelligent multi-rotor carrier UAV platform, which can carry a variety of communication loads such as self-assembling radios, trunking mini-base stations, LTE mini-base

stations, etc. Multiple groups of wireless base stations are deployed autonomously, and the base stations are interconnected to form a variety of flexible communication application configurations to form ultra-short wave communication between the rear emergency centre, the field command and the rescue team.

The project purpose is to achieve the rapid deployment of communication base stations and the establishment of wireless communication and acquisition of positioning

for areas without network communication in a relatively short period of time, including areas where the original network signal failed in earthquake relief, areas where rescue missions were conducted in real time, areas for field exploration, and areas for military activities. The team uses this emergency response system to achieve sustainable development in urban and rural areas as well as to reduce the annual economic losses and casualties to the country in order to achieve sustainable profitability of the project.

Project results:

- Practical trials of the initial product have been completed.
- The project has been awarded the provincial key project under the “Climbing Plan,,.
- One utility patent, six invention patents under examination and two utility model patents under examination.
- Cooperation with several companies (cooperation agreements have been signed).

NEW PROCESS FOR THE PRODUCTION OF HIGH-PERFORMANCE AEROGELS

Team members: Ruiting Zou, Peiping Zheng, Guangpeng Zhang, Lei Xie, Yanling Guo, Yuetian Kang, Xuemei Li, Anqi Anqi, Huiheng Liu, Wan Li
Mentor: Huijun Wu, Yanping Zhang
University: Guangzhou University

In response to major national strategies such as carbon peak and carbon neutralization, the requirements of building energy conservation and engineering application technology have been improved. Therefore, aerogel composite insulation material is widely used in building insulation material industry because of its characteristics of ultra-low thermal conductivity, high compressive strength and flexural strength.

By using directional fiber as skel-

eton, one-step solvent replacement technology, hierarchical atmospheric drying technology and other technologies, the team independently developed high-performance building thermal gel composite materials.

The material has the advantages of fire resistance, non-combustion, super insulation, and the same life as the building, which significantly reduces the production cycle and cost, and solves the common problems in the industry such as fire hazard, poor insulation performance and poor durability of the building insulation material. The material has the advantages of fire resistance, non-combustion, super insulation, and the same life as the building, which significantly reduc-

es the production cycle and cost, and solves the common problems in the industry such as fire hazard, poor insulation performance and poor durability of the building insulation material. The third party testing institutions certified by the National CMA test: compared with the conventional polystyrene board insulation material insulation performance improved 1.2 - 2.6 times, compared with the American Aspen product insulation performance improved 30%.

The aerogel insulation compos-

ite developed by our team has excellent performance and has broad development and application prospects in public buildings, residential buildings, refrigerated transportation and other industries, which is of positive significance to promote the sustainable development of the construction industry and the construction of ecological civilization.

DNA SWITCH

Team members: Anna Maria Gambetta, Sonia Amato

Mentor: Graziano Martello

University: University of Padova

Huntington disease (HD) is an incurable neurodegenerative disease affecting ~100,000 people worldwide. Therapeutic approaches based on traditional drugs have so far failed, despite the interest of several Big Pharmas. Our innovative approach is based on the use of genes for therapeutic purposes, which are delivered by adenoviral vectors or mRNA, tools commonly used for vaccines against COVID-19. We have identified genes capable of

curing preclinical models from HD and patented this technology. We therefore want to develop a therapeutic product, ready for clinical trials and the market. Production, sale and clinical trials are expensive and complex activities for a startup, so we will establish partnerships with pharmaceutical companies based on exclusive patent license agreements. We intend to apply our technology to other HD-related neurodegenerative diseases, broadening our potential market.

INTELLIGENT INTEGRATION OF CONTEMPORARY EDUCATIONAL SYSTEMS

Team members: Kaihong Wang, Jie Jiang, Zhongming Zheng, Yujia Zhai, Wenzhao Li, Yueqi Wang, Zhiwen Chen, Huaqiong Chen, Chaoyue Zhao, Kaijie Wang

Mentor: Kun Li, Mansi Wang

University: Guangzhou University

Guangzhou Zhongshuo Architectural Design Institute Co., Ltd. takes the science and education wisdom space of primary and secondary schools as the starting point, takes “art design + digital technology,” as the design orientation, and provides customers with high-standard one-stop project construction solutions through the “BIM + VR three-dimensional integrated system,” developed by the company, breaking the industrial barriers of “space design, multimedia equipment, project construction and education management,” Build an innovative model of “personalized design and large-scale construction,” of science and education smart space, promote the digital management of the whole process of science and education smart space construction project, and finally provide a comprehensive perception, intelligent, data-based, networked and collaborative teaching and research

management smart learning environment for science and technology education in primary and secondary schools. China Internet plus China primary school has won 18 digital intellectual property rights including “digital BIM modeling and design exhibition system,” and “VR visualization intelligent space display system.” By March 2022, it has served over 100 schools, enterprises and institutions in Guangdong Zhongyuan middle school, the vast primary school attached to the affiliated primary school, and Hong County primary school. In 2021, China’s green plate board (Stock Code: 251687) won the seventh China International “Internet +,” student innovation and entrepreneurship competition gold medal in Guangdong. The winner of the 8th Guangzhou Youth Innovation and entrepreneurship competition of QingChuang cup and the second prize of Qinglan international entrepreneurship competition have won the industry investor Guangdong Huapei education Angel round of 5 million investment and Yujian venture capital’s ten million investment intention.

VIRTUALIZON

Team members: Nikola Peric-Djordjevic, Jeremy Booth

Mentor: Inu Rana

University: Western Sydney University

The Metaverse is happening, and will be a \$1.3T industry in less than a decade according to Boston Consulting Group, making it the next big leap in the digital world. E-commerce is accelerating at a rapid rate and disrupting traditional ways of doing things including traditional sales channels. With consumers spending exponentially more time and money in digital spaces, the Metaverse is creating a new, innovative channel for businesses to reach their customers. Industries outside of big tech will be late to the game, or left behind, lacking experience, understanding or even appreciation for the Metaverse. This is where we come in. Virtualizon is an interactive media marketing company that specialises in gamifying business advertising solutions and campaigns for the Metaverse. We will build engaging and interactive virtual advertisements to promote our client's product or service, while providing a direct channel for purchase. With our background in games development, we are unique-

ly equipped to translate business requirements into engaging virtual promotional strategies and experiences. Virtualizon will usher traditional Business to consumer brands into the Metaverse. The metaverse provides a new, innovative channel for brands to reach their consumers through means like in-game-world billboards or stalls, as consumers spend exponentially more time and money online. Gamification is proven to boost engagement, with 60% of consumers saying they would be more likely to buy from a brand if they enjoyed playing a game with it. Combined with the Metaverse, we can build a rich, engaging and seamless customer experience. We are bridging traditional businesses to meet the modern consumer's needs of convenience, inclusivity, and social connection using the Metaverse. We are a pair of high achieving young entrepreneurs and game developers eager to pioneer the exciting future of digital experiences. Between us, our skills cover the whole spectrum of games design. We know that we can apply our skills to usher traditional businesses into the gold rush of the digital age.

LOVE, SWEET MOM

Team members: Xiao Wang, Yining Huang, Yun Li, Linqing Chen, Zhixuan You, Sisi Zhong, Yongzhao Zhao

Mentor: Yingtao Li

University: Guangzhou Medical University

Love, Sweet Mom is a project design for mothers with gestational diabetes mellitus (GDM). GDM can be controlled through strict diet and moderate exercise. However, most patients don't know the right way to control blood glucose and lack of disease education in daily life. In addition, doctors found it hard to manage all these patients in a traditional way. Our project launched a mini-program, Love Sweet Mom, on the most popular social software in China.

On the one hand, this mini-program offers two main services for patients. The program provides an intelligent and scientific sugar control solution online after patients signing up and uploading relevant information. In terms of disease education, various kinds of online

courses about GDM are available on the mini-program, allowing patients to understand GDM thoroughly.

On the other hand, doctors in the hospital can better manage patients from the mini-program. Doctors are able to evaluate patients' condition through data such as every-day blood glucose, change of weight, baby's heart rate and make timely adjustment of therapy solution online.

This project provides advanced and sustainable solution for management of GDM. What's more, it helps build close connection between doctors and diabetic mothers. Our ultimate goal is to benefit all mothers with GDM in China. With the development of the internet and online services, we would like to bring better medical resources to pregnant women in remote areas of China, solving the existing gap between urban and rural medical care, and achieve medical equity.

START-UP TEAMS

MAXIMILIANA

Team members: Jorge Terreu Serrano, Pedro Malo Perisé

University: University of Zaragoza

Maximiliana, first of all, is my grandmother. She is 89 years old, and she was born in a small village of The Teruel's province. She has been my whole life a meaning example of good heart. She is the reason of this project and my day-to-day motivation.

Maximiliana is a self-sufficient phone aimed at old people or people with technology difficulties that works totally independently.

The objective is:

1. to break the digital gap
2. to give the opportunity to everybody to have an easy access to the virtual
3. communication and take advantage of it
4. to assure they feel comfortable and integrated in the modern society

How does it work? Two interfaces:

1. The responsible person controls remotely the Maximiliana device from the dashboard. The family log in to their personal dashboard where they have access to all the functions...

- Battery checking.
 - Device geolocalization.
 - Videocalling.
 - Calling
 - Text messages
2. The user carries the device and does not need to touch anything. The user has basic functions such as:
- Easy calling touching the face contact.
 - Emergency calls shaking the phone.
 - Automatic answering of calls and video calls.
 - Simple messages read out loud by the device.
 - New updates with incredible functions.

Right now, our numbers are:

- +800 clients that now belong to the Maximiliana family
- +120 hours a day of video calls, wich means 120 hours of accompaniment to loneliness
- Average age of the users of 88 years
- Average age of the founder and the employees of 22 years

STARITRON—AI+IP AUTHORIZED ACCELERATED ANALOG CHIP DESIGN

Team members: Yuting Zhang, Yuwen Zhang, Zihua Yang, Xiaofei Yu, Minglang Zhou, Peidong Lin, Weijian Chen, Jingci Yang, Tianxian Wu

Mentor: YanhanZeng

University: Guangzhou University

STARITRON is dedicated to chip design services, creating a one-stop service platform for chip design and analog IP authorization. Aimed at providing customized chip solutions for start-up chip design companies that are weak in developing analog ICs, Staritron makes a breakthrough in crucial links like chip design, taping out, assembly, and testing, which is helpful in improving the efficiency of designing, shortening the cycle of and cutting the cost of research and development, and minimizing the potential risk of product. Being a pioneer in the chip design service industry is what Staritron strives for. Additionally, compared with the traditional IP industry, Staritron has three categories of twelve good performance power supply IPs and is committed to breaking the limitations of domestic integrated circuit IPs. Based on our efforts, Staritron creatively proposed an AI-optimized platform intelligent adaptation process that successfully replaced the previous manual adaptation model. At the same time, the AI + IP busi-

ness model has complementary integration advantages that can provide better performance, lower cost and high efficiency solutions for analog IP. Moreover, Staritron is rich in experience of designing and advanced technology. The independent and controllable core of technology and our own intellectual property make us in a leading position. In addition, Staritron focuses on one-stop service chip design and chip optimization, which excels in low cost, high quality, relatively low substitutability, innovative technology, and strong feasibility of industry promotion. Staritron is preparing to register our own company and facilitate our long-term cooperation with many companies and we also seek to establish an integrated chip design system with our cooperative enterprises. As for the contribution, Staritron innovates the talent training model, realizes the integration of specialization and innovation, which can cultivate talents in relevant field and it is expected to directly drive numerous jobs. Staritron will play a vital role in promoting education and driving employment.

FLOATINGLIFE TO SEA

Team members: Wendi Long, Jialong Miao, Haoting Li, Yuen Zhu, Ruitong Liu, Kaijun Wang, Jiaying Li, Jing Huang, Yinling Yang, Yan Xiang

Mentor: Yan Zhang, Christopher G.Vail

University: Guangzhou University

FloatingLife to Sea---New Model of China's Brand, is an Internet project dedicated to cross-border e-commerce, brand promotion, overseas advertising, cross-border talent reserves, and overseas social media operations. While satisfying the retail sales of our own goods, the project can also address the problem of the shortage of sales channels and difficulties in brand promotion of large and medium-sized manufacturers and independent designers.

At present, we have finished the goods selection of Floating-Life Fashion Station I and established the platform. By cooperating with a number of suppliers, we are selling more than 100 items and have synchronized with the operation and advertising of the public homepage on Facebook and Instagram. Also, the PayPal payment channels have been built and smooth logistics chains have been established.

We have cooperated with independent designers in Hong Kong to build a brand website for our project to jointly promote operations. At the same time, we have worked with the GE anti-drug project of Guangzhou University and the 'Public Welfare: A Little Sweet' to generate income for families with children with disabilities. Later, LifeDreamMaker, the latest all-category website has been built. We have put our operation on TikTok with nearly 100 million view counts and great influence. We are now planning the British TikTok Shop. Also we have signed the official TSP service provider of ByteDance.

When all the models and departments are to be completely established and prove efficient and feasible, we will carry out cross-border e-commerce training and incubation with a view to tap the talent of outstanding young people in colleges and universities, continuously cultivate and produce outstanding talents who can work across border. The project will also give a hand to student teams and social people who aspire to establish their businesses.

