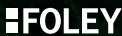




Semiconductors & AI Innovation Forum

October 28, 2024 | San Francisco, CA

arm  **FOXCONN**[®]
HON HAI TECHNOLOGY GROUP

 **FOLEY** **CBRE**
FOLEY & LARDNER LLP



Young Sohn

Founding Managing Partner, Walden Catalyst Ventures
Chairman of Semiconductor Advisory Board, Samsung Electronics
Chairman of HARMAN Board of Directors
Co-Founder, Extreme Tech Challenge
Former Corporate President and Chief Strategy Officer, Samsung Electronics

Bill Tai

Angel Investor
Partner Emeritus, CRV
Co-Founder, Extreme Tech Challenge

SPONSORS



Search Extreme Tech Challenge: [in](#) [yt](#) [fb](#) [ig](#) [x](#)

Semiconductors & AI Innovation Startup Cup

Semi-Finalists

Ambient Scientific AI Applied Brain Research	4
AREYLight AI Solutions ATLANT3D Nanosystems	5
Blueprint RTL Grapheal	6
Hamster Energy Inchfab	7
Jmem Technology Co., Ltd. Literal Labs	8
Logic Overdrive Inc. Morphing Machines	9
NetOLink nanoLambda	10
NSS Water Enhancement Phanofi	11
Solid State of Mind SorbiForce	12
SpaceAI Terecircuits	13
TycheTools UncovAI	14
UniSCool Zodhya	15

Ambient Scientific AI

Santa Clara, CA, USA



ambient
scientific

Ultra-low power AI Microprocessor design & architecture

Ambient Scientific is a semiconductor company pioneering ultra-low power AI processors for edge and on-device AI applications. We created our breakthrough Digital Analog Compute technology called DigAn@ to leverage the scalability of digital and efficiency of analog compute, harnessing the best of both worlds.

Funding stage: Series A

**GP Singh, CEO & Founder | gpsingh@ambientscientific.ai
www.ambientscientific.ai**

Applied Brain Research

Waterloo, Ontario, Canada



Powerful low-energy AI for NLP anywhere

Single chip solutions for speech recognition, text-to-speech and natural language processing for edge IoT devices. Proprietary state space network models, full stack training and deployment toolchain coupled with purpose-built processors.

Funding stage: Seed

**Kevin Conley, CEO | kconley@yahoo.com
www.appliedbrainresearch.com**

AREYLight AI Solutions

Ankaran, Slovenia

AREYLight AI

Advanced facilities efficiency via AI sensor integration

AREYLight AI delivers tangible results and stands out as a leader in driving data center efficiency and sustainability. We revolutionize data center sustainability through intelligent sensor integration, AI-driven optimization, renewable energy integration and solutions from small server rooms to hyperscale facilities.

Funding stage: Series A

**Haluk Yilmaz, CEO & Co-Founder | halukmy@gmail.com
www.areylight.com**

ATLANT3D Nanosystems

Copenhagen, Denmark

ATLANT 3D

Atomic-layer manufacturing for diverse micro/nano fab

We developed an atomic layer advanced manufacturing technology which enables on-demand micro- and nano-electronics manufacturing with more than 450 different materials and on any type of surface. Our technology has unique capabilities opening a number of applications in Advanced Materials, MEMS and sensors, optics and photonics, displays and RF devices, smart glasses and power electronics.

Funding stage: Series A

**Maksym Plakhotnyuk, CEO & Co-Founder | mp@atlant3d.com
www.atlant3d.com**

Blueprint RTL

Podgorica, Montenegro



blueprintRTL

AI-driven documentation for chip design

An innovative AI-powered solution to address the challenges in digital design documentation, particularly for ASICs and FPGAs. We automate the creation of technical documentation, including complex timing and block diagrams, through seamless integration with popular digital design tools, facilitating the import and analysis of RTL code in formats such as Verilog, VHDL, and SystemVerilog.

Funding stage: Bootstrap

**Toma Gavric, CEO Co-Founder | design@blueprinrtl.com
www.blueprinrtl.com**

Grapheal

Grenoble, France



Grapheal
Sensing, Connected

True monolayer graphene for cost-effective nano films

We develop and manufacture true monolayer graphene on flexible substrates & films, enabling next-generation sustainable and cost-effective nanoelectronics films for IoT sensors and other electronics. Grapheal owns the entire value chain from graphene synthesis to complete sensor integration down to wireless connectivity, data acquisition and analysis.

Funding stage: Series A

**Vincent Bouchiat, CEO and Co-Founder | vbouchiat@grapheal.fr
www.grapheal.com**

Hamster Energy

Lagos, Nigeria



Distributed energy resources (DER) trading platform

Flexible energy trading in a decentralized energy system. By synergizing distributed energy resources (DERs) like solar power, battery systems, and electric vehicles (EVs) with cutting-edge hyperscale technologies like big data, AI, and blockchain, we are building an energy trading platform that will allow anyone to participate in decentralized energy markets.

Funding stage: Pre-Seed

**Idris Rufai, CEO and Co-Founder | alomalegend@yahoo.com
www.hamsterenergysolutions.com**

Inchfab

Sunnyvale, CA



Ultra-low-cost fabrication for next gen IoT sensing chips

InchFab has a novel fab platform that costs 1000x lower than its closest competitor while maintaining the same process capabilities. The world's only drop-in ready-to-use fab, developed at MIT, with over 100K devices manufactured so far in 2024.

Funding stage: Seed

**Mitchell Hsing, CEO and Co-Founder | mhsing@inchfab.com
www.inchfab.com**

Jmem Technology Co., Ltd.

Taipei, Taiwan



Innovation in integrated circuit cybersecurity

Hardware security IP and chip design services. Traditional HW security risks being compromised by the rapid computational speed of quantum computers. Jmem Tek's patented technology is based on Physical Unclonable Function (PUF) for Post-Quantum Cryptography (PQC) modules, using the most complex computational methods for encryption to prevent hacker attacks.

Funding stage: Series A

**Lydia Wang, Marketing and Co-Founder | lydiawang@jmemtek.com
www.jmemtek.com/tw/**

Literal Labs

Newcastle, UK



Tsetlin machines for AI superior to today's neural networks.

Literal Labs applies the Tsetlin machine approach that is faster, explainable, and orders of magnitude more energy efficient than today's neural networks, pioneering a new generation of artificial intelligence.

Funding stage: Pre-Seed

**Noel Hurley, CEO | noel@literal-labs.ai
www.literal-labs.ai**

Logic Overdrive Inc.

San Francisco, CA



AI bots without coding, plus full cloud services for governments

Our No-Code AI Bot Builder is an innovative platform enabling businesses to create AI powered bots without coding. Fully customizable, it can be trained with your private data and available as a white label solution. We have already secured empanelment with US and Singapore governments, positioning us as a trusted provider of cutting-edge cloud/AI/ML solutions in the public sector as well as large enterprises.

Funding stage: Seed

**Ketan Parajia, CEO and Co-Founder | ketan365@live.com
www.logicoverdrive.com**

Morphing Machines

Bangalore, India



Runtime-reconfigurable many core processors

We are a fabless chip startup from the Indian Institute of Science (IISc). The company's patent protected, many-core processor REDEFINE™ can concurrently accelerate heterogeneous workloads, on a homogenous fabric of processing cores, as dynamically instantiated Domain Specific Accelerators. REDEFINE™ customers benefit from performance and power improvements, with dramatically lower time-and-cost-to-market.

Funding stage: Seed

**Deepak Shapeti, CEO and Co-Founder, deepak@morphing.in
www.morphing.in**

nanoLambda

Daejeon, Korea



Digital nano spectrometer, <0.1% usual size and cost

Spectroscopy is a powerful tool, but spectrometers are too big, expensive and hard-to-use. We revolutionized the 300 year old spectrometer tech with a novel digital nano tech, making the world smallest spectrometer, less than 0.1% of conventional solution's size and cost, opening up new opportunities; on-site, real-time, continuous, non- invasive material analysis. Our aim is to sell the spectral sensors in volume, license IP, either application tech or even sensor tech in certain limited fields.

Funding stage: Series A

**Bill Choi, CEO and Co-Founder | ok2bill@nanolambda.net
www.nanolambda.myshopify.com**

NetOLink

Paris, France



Using GenAI to autonomously manage a facility's HVAC

The company's core focus is on autonomously managing HVAC (heating, ventilation, and air conditioning) systems to significantly reduce energy costs and carbon emissions while providing actionable insights for building (i.e. datacenter) operators. Our flagship product, Tenza HVAC AI is built around several key features: Autonomous Predictive Control, Scalable Integration, Digital twins to simulate building and HVAC system behavior, Physics-Aware Neural Networks for effective HVAC monitoring, Predictive analytics to understand asset behaviors and anticipate failures.

Funding stage: Bootstrap

**Akshay Makar, CEO and Co-Founder | a.makar@netolink.in
www.tenza.cc/hvac**

NSS Water Enhancement

Göteborg, Sweden



Nanopure water for next generation semiconductors

In semiconductor manufacturing ultra-pure water (UPW) is used as a cleaning agent and therefore supply of the utmost quality is essential. UPW should be without any dissolved pollutants or particles that may precipitate and cause microchip failure. Upgrading to our “nano-pure water” (NPW), guarantees that no contaminations above a certain level exist, which will significantly increase yield during fab.

Funding stage: Angel

**Björn Holmström, CEO and Co-Founder | bjorn.holmstrom@nsswater.com
www.nsswater.com**

Phanofi

Kongens Lyngby, Denmark



Energy Efficient high speed transceivers for data centers

Advanced transceiver technologies for data centers with innovative encoding/decoding schemes that provide high-speed, scalable, and energy-efficient connectivity solutions for AI workloads, achieving lower power consumption without compromising high speed performance, contributing to environmental sustainability and substantial cost savings for our customers.

Funding stage: Seed

**Hitesh Sahoo and Co-Founder, CEO | hitesh@phanofi.com
www.phanofi.com**

Solid State of Mind

Montréal, Québec, Canada



Deep Meaning™ performs magnitudes better than Deep Learning

We are shaping AI to be adaptable, trainable, trustworthy, sustainable, by making a rupture from the limitations of deep learning. Our core foundation is decades of research in ethology, psychology, and neuroscience to create Deep Meaning™.

- Deep Meaning™ requires 10,000 times less training data
- Deep Meaning™ requires 100,000 times less energy
- Deep Meaning™ can flexibly adapt and be embedded or cloud-based.

Funding stage: Seed

**Maxime Julien, CEO and Co-Founder, maxime@solidstateofmind.com
www.solidstateofmind.com**

SorbiForce

Tucson, Arizona



Non-metal sustainable battery for facilities energy storage

The first non-metal sustainable battery, made from renewable raw materials and the most cost-effective, safe and with zero environmental impact. Our market is energy storage for facilities like datacenters. We invented optimal electricity storage and a balanced battery system with the perfect combination of characteristics.

Funding stage: Seed

**Serhii Kaminsky, CEO and Co-Founder | sk@sorbiforce.com
www.sorbiforce.com**

SpaceAI

NASA Lab, Merritt Island, USA



Open-source SW-defined computer to integrate space and earth

Software defined distributed computer. Cubesat open-source ecosystem for ground and space. Space AI is deploying a barrierless distributed computer throughout a downloadable node powered by Linux within an open-source operating system, the SpaceOS. To interact with robots and IOT, we have created NIO, an open-source supercomputer, based on the CubeSat standard, which integrates Space and Earth.

Funding stage: Series A

**Andres Ortner, CFO & Co-Founder | andres@spaceai.com | andresortner@gmail.com
www.spaceai.com**

Terecircuits

Mountain View, CA



Solving circuit assembly and packaging challenges

Terecircuits was founded to develop the Photo-Polymer Mass Transfer process and meet the challenges of Industry 4.0. Today we work with industrial tool partners and their OEMs to solve circuit assembly and advanced packaging challenges by developing novel materials and processes at the boundary of what is possible. Our IP portfolio includes encapsulation materials and liquid metal interconnects for the "More than Moore" generation of products.

Funding stage: Seed

**Wayne Rickard, CEO and Co-Founder, wrickard@terecircuits.com
www.terecircuits.com**

TycheTools

Madrid, Spain



AI system to automate datacenter cooling within days

Our proprietary wireless sensors, gateways and power meters connect our AI-driven platform to data centers' cooling systems. Our algorithm identifies opportunities for optimizing cooling—as well as mission critical risks at the rack level – reducing energy consumption up to 40%. Our no single-point-of-failure system can optimize cooling 24-7.

Funding stage: Seed

**Cristina Chu, CEO and Co-Founder | cristina.chu@tychetools.com
www.tychetools.com**

UncovAI

Nice, France



Efficient, sustainable solution for detecting GenAI content

An efficient and ecological method for detecting generative content. Instead of relying on Deep Learning as all our competitors, we developed an in-house model for detecting GenAI content such as text, image and soon video, and able to distinguish between GPT-like and human-made.

Funding stage: Bootstrap

**Florian Barbaro, CEO and Founder | detectgentext@gmail.com
www.uncovai.com**

UniSCool

Lleida, Catalonia, Spain



Direct-to-chip liquid cooling, reducing power used by 70%

Our intelligent direct-to-chip liquid cooling system is capable of reducing power consumption by 70%, based on a self-adaptive heat sink, which adjusts heat extraction more efficiently than current solutions to the local and instantaneous needs of the cooled device. Can be placed on-chip to replace the aluminum heat sinks in air cooling or incorporated inside the microchip itself and allows up to 70% lower electrical energy used in the cooling process, heat extraction of up to 300 W/cm².

Funding stage: Pre-Seed

**Ramon Jiménez Serrano, CEO & Co-Founder | ramon.jimenez@uniscool.tech
www.uniscool.tech**

Zodhya

Hyderābād, India



Facilities get 30% lower energy use with HW and SW suite

Zodhya makes industrial and commercial buildings, such as datacenters, 30% more energy-efficient with a combination of hardware and software. For HVAC hardware, 'Saver', is patented AI-based technology that optimizes resource consumption. On the software side, 'Soul', uses machine learning to detect repairs and inefficiencies in the space and optimises connection to renewables.

Funding stage: Seed

**Rohith Pallerla, CEO & Co-Founder | rohith@zodhyatech.com
www.zodhyatech.com**



See you at



Powered by The Consumer Technology Association®

Semiconductors & AI Innovation Startup Cup

January 7, 2025 | Las Vegas, NV

The goal of the Semiconductors & AI Innovation Startup Cup is to accelerate the technologies that lead to a sustainable and environmentally friendly future.



Check out the finalists using the QR code

extremetechchallenge.org