

December 2022

Happy Holidays from MemComputing!

2022 was a year of tremendous growth for the company. Not only did we complete a number of big commercial projects with our partners in oil & gas and transportation logistics, but have gained serious traction within the Department of Defense. We are currently working with the Air Force, Space Force, and Special Operations Command on a number of SBIR contracts related to national security and space-based applications. While each of these projects is poised for follow on contracts, we're also exploring additional opportunities within the DoD such as developing MemComputing-based ASICs. Keep your eyes peeled for hardware-related announcements early next year!

We look forward to advancing our dual-use technology to enhance the capabilities of both our commercial and DoD partners in 2023. Here are a few of our highlights from this year.

[Visit our Website](#)

Notable MemComputing Highlights 2022



SuperComputing Conference 2022

MemComputing exhibited at SC22 in Dallas, TX where we discussed our technology and its applications in High Performance Computing (HPC). Looking forward to this event again next year!

USSF Case Study

MemComputing worked with the U.S. Space Force to develop a satellite constellation design tool that optimizes the tracking & processing of high-speed aerial targets & delivers that information to the warfighter in a timely fashion. Read the full case study [here](#).



USAF IDIQ Contract

Honored to have been awarded a contract by the United States Air Force Advanced Battle Management Systems (ABMS) program to enable the Joint All Domain Command & Control (JADC2) strategy. MemComputing's portion of the contract is capped at \$950M. We look forward to applying our technology to further enhance the capabilities of the warfighter. Full press release [here](#).

HPC Presentation

Earlier this year, our CEO John Beane delivered a presentation to The Society of HPC Professionals in which he gave an overview of our technology and its applications in High Performance Computing. Check out the presentation [here](#).



AFWERX SBIR Contracts

Thrilled to announce we've been awarded two new Phase II SBIR contracts sponsored by AFWERX. These proceed the successful Phase I contracts completed earlier this year. We are proud to continue working with the Air Force and Space Force to enhance the capabilities of the warfighter. Read more [here](#).

MemComputing vs Quantum Computing

We are often asked what the difference is between MemComputing and quantum computing. Discover the fascinating similarities and key disparities between these two computing paradigms in this blog. Read more [here](#).



Autonomous Vehicle Routing

Learn how MemComputing is optimizing the coordination and routing of autonomous vehicles across a number of markets to maximize efficiency while avoiding collisions. From warehouse automation to package delivery, MemComputing is quite literally driving in a new era of advanced AI for AVs. Video [here](#).

Energy Tech Venture Forum

MemComputing attended the Rice Alliance Energy Tech Venture Forum in Houston, Texas where we met with industry leaders and discussed the application of our technology across the energy chain.



Foreign Patents

We're proud to announce that we've been granted two new patents from Australia and China for our technology. This marks our second and third foreign patents, the first coming from Japan last year. This adds to our two US patents, strengthening our IP position and coverage of our technology on a global scale. We also filed numerous patent applications related to MemComputing-based

Application Specific Integrated Circuits.

Helicopter Scheduling Demo

We have successfully completed a case study demonstrating the power of our Virtual MemComputing Machine when scheduling a fleet of helicopters for delivery to offshore oil rigs in the Gulf of Mexico. This video shows how our application works to solve this problem optimally at scale, enabling our partners in Oil and Gas to save millions in fuel and operational expenses, while also reducing their carbon footprint. Video [here](#).



Infirms Conference

MemComputing exhibited at the INFORMS Business Analytics conference in Houston, TX where we met with operations researchers and discussed the advantage of MemComputing when solving complex supply chain problems.

Case Study with Lockheed Martin

We have successfully completed a project with Lockheed Martin demonstrating how our Virtual MemComputing Machine solves the Multi-Agent Path Finding (MAPF) problem at scale when coordinating a swarm of autonomous drones. Solving the MAPF problem is critical to achieving the next-generation of AI as it supports applications in warehouse automation, traffic optimization, and autonomous vehicles. Read the [Case Study](#).



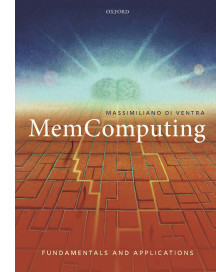
Max Di Ventra Fellowship

MemComputing co-founder Massimiliano Di Ventra has been named a 2022 fellow of the Institute of Electrical and Electronics Engineers (IEEE). This prestigious recognition comes from his contributions to quantum transport in nanoscale systems and in-memory computing (aka MemComputing). More information [here](#).

MemComputing Book

Dr. Max Di Ventra has published his latest book "MemComputing", which is now

available for order. This is a tremendous resource that details the intricacies and brilliance of MemComputing, as well as its ability to solve some of the world's toughest problems. Talk about a nice Christmas gift!



Upcoming Events

2023 Energy HPC Conference



MemComputing is exhibiting at the 2023 Energy HPC Conference in Houston, TX to engage with the energy community and demonstrate MemComputing's capabilities in the industry.

EDGE 2023 Supply Chain Exchange Exhibition



MemComputing is exhibiting at the EDGE 2023 Supply Chain Exchange Exhibition where we will be showcasing our technology to industry leaders and clients.

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