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RE: Multiscale Systems, Inc. receives federal grant to support advanced manufacturing R&D in Worcester

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Worcester, MA, June 11, 2019 – Multiscale Systems, Inc. has been awarded a [National Science Foundation \(NSF\)](#) Phase I [Small Business Innovation Research \(SBIR\)](#) grant for \$224,553 to conduct research and development (R&D) work on **Ultra Low-Cost Mechanical Metamaterials to Enable Mobility and Interactivity for Cyber-Physical Devices.**

Multiscale Systems, Inc. is performing fundamental R&D on the underlying technology required to manufacture and commercialize its advanced material system.

Multiscale Systems, Inc.'s mechanical metamaterial technology enables conventional materials to be enhanced without chemical or molecular modification, leading to materials that are significantly lighter, stronger, multi-functional, and failure-resistant. Products made with mechanical metamaterials are more energy-efficient and have longer service lifetimes, leading to cost savings for consumers and net-positive environmental impacts.

This innovation will result in notable advances for manufacturing. Conventional materials have well-established limitations and life times, and material scientists have thought that new chemistries or polymers were the most likely path toward innovation. However, the university-level basic research that uncovered the fundamentals of mechanical metamaterial technology showed unconventional opportunities were hiding right around the corner. By simply embedding geometric patterns into common materials, they become enhanced by the interaction between geometry and mechanics. The team at *Multiscale Systems, Inc.* has developed methods and software for designing these patterns, allowing them to find new patterns that meet industry-specific needs.

“The National Science Foundation supported my physics PhD through the EFRI-ODISSEI program, and the critical discoveries made during those years have led to a number of cutting-edge ideas,” said Jesse Silverberg, PhD, founder of *Multiscale Systems, Inc.* “This grant from the NSF is a critical resource for us as we work to commercialize the most promising discoveries into high-impact breakthrough technologies.”

Multiscale Systems, Inc. is also benefiting from the programs and support offered by MassChallenge, a Boston-based business accelerator. *Multiscale Systems Inc.* is currently using temporary office space provided by MassChallenge in the waterfront district of Boston, but is seeking to locate both office and manufacturing facilities in Worcester later this year.



Once a small business is awarded a Phase I SBIR/STTR grant (up to \$225,000), it becomes eligible to apply for a Phase II grant (up to \$750,000). Small businesses with Phase II grants are eligible to receive up to \$500,000 in additional matching funds with qualifying third-party investment or sales.

NSF accepts Phase I proposals from small businesses twice annually in June and December. Small businesses with innovative science and technology solutions, and commercial potential are encouraged to apply. All proposals submitted to the NSF SBIR/STTR program undergo a rigorous merit-based review process.

To learn more about America's Seed Fund powered by NSF, visit: <https://seedfund.nsf.gov/>

About the National Science Foundation's Small Business Programs: America's Seed Fund powered by NSF awards \$200 million annually to startups and small businesses, transforming scientific discovery into products and services with commercial and societal impact. Startups working across almost all areas of science and technology can receive up to \$1.5 million in non-dilutive funds to support research and development (R&D), helping de-risk technology for commercial success. America's Seed Fund is congressionally mandated through the Small Business Innovation Research (SBIR) program. The NSF is an independent federal agency with a budget of about \$7.8 billion that supports fundamental research and education across all fields of science and engineering.

To learn more about *Multiscale Systems, Inc.*, its team, and its technology, visit: www.mss.science