



WORKING TOWARD a
SUSTAINABLE
FUTURE

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2025 Iowa State University Symposium on Sustainability

Dr. Deb Chachra, PhD

Dr. Deb Chachra, PhD, is a distinguished materials scientist and professor at Olin College of Engineering. She specializes in biological materials and infrastructure, with a keen interest in engineering education. Dr. Chachra is the author of the book *How Infrastructure Works: Inside the Systems That Shape Our World* (2023), which explores the intricate systems that underpin our daily lives.

Dr. Chachra earned her Bachelor of Science, Master of Arts, and Doctor of Philosophy degrees in Materials Science from the University of Toronto. Her doctoral research focused on the influence of fluoride on bone quality, supervised by Marc Grynpas. She later conducted postdoctoral research at MIT, investigating how bone responds to aging and the shelf-life of bioprosthetic heart valves. At Olin College, Dr. Chachra has been a pioneer in developing student-centered learning experiences, emphasizing hands-on, design-focused courses. Her work aims to foster motivation and reflective practice among young technologists. She is also deeply involved in educational research, particularly in improving retention and diversity in engineering education for women and minority students.

Dr. Chachra has written for various publications, including *The Atlantic* and *Nature*, and maintains a popular newsletter called *Metafoundry*. Her work has been recognized with awards such as the NSF CAREER Award.

This lecture has been recorded and is available to view on the [Iowa State Lecture Series Available Recordings](#) page.