



The Grainger College of Engineering

2023-2024 Fellowship Recipient

Illinois Concrete Industry Graduate Fellowship in Concrete Paving

Ben Manaugh

Department of Civil & Environmental Engineering

Area of Study: Construction Materials

Research Group: Roesler Group

Thank You!

I sincerely value the opportunity given to me by the funding of my research through the Illinois Concrete Industry Graduate Fellowship in Concrete Paving I was awarded. With this, I can begin my professional career while continuing my academic one.

I look forward to making the most of the time I will have at the University of Illinois at Urbana-Champaign during my time earning my Masters degree!

Sincerely,
Ben Manaugh

Bachelor of Science in Civil and Environmental Engineering,
2023, University of Illinois at Urbana-Champaign

Why did you want to be a Grainger Engineer?

I wanted to become an engineer because I enjoy technical work involving research, problem-solving, calculations, and communication of ideas/work. I chose civil engineering, and specifically structures for my BS and construction materials for my MS degrees, because it matched my reasoning for becoming an engineer with buildings and building materials which is more of my passion. I chose The Grainger College of Engineering because I am from Illinois and I wanted to take the opportunity to get a degree from an excellent engineering program that is local to me. I also felt that, after undergrad., the college would provide me with the best instructors and research for facilitating my research.

Tell us about your research activities and focus area.

My research activities are focused on 3D printed concrete (3DPC) using coarse aggregates. Some of my goals are to address mix design using variable aggregate types to meet printing requirements, plastic and drying shrinkage, typical reinforcing, and print-quality under variable weather (RH, temperature, wind-speed).

What do you want to do after you graduate?

My dream job would be to do non-destructive evaluation of reinforced concrete structures. Specifically historic/old structures that require investigation and rehabilitation to extend their longevity.



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Jordan Ouellet

Department of Civil & Environmental Engineering

Area of Study: Transportation Engineering

Research Group: Roesler Research Group

Thank You!

The Illinois Concrete Industry Graduate Fellowship in Concrete Paving has allowed me to focus fully on research and academic activities. I was able to perform multiple field studies across the United States and the data collected will allow me to strengthen my thesis and broaden the outcome of my research. I was also invited to 2 major conferences in 2024 to present my work to the concrete and transportation community.

Sincerely,
Jordan Ouellet

Associates Degree in Civil Engineering, 2012, College Montmorency, Laval, Canada

Bachelor's Degree in Construction Engineering, 2016, École de technologie supérieure, Montréal, Canada

Master's Degree in Pavement Engineering, 2018, École de technologie supérieure, Montréal, Canada

Why did you want to be a Grainger Engineer?

I have always wanted to make a difference on our built environment and reduce its cost to society.

Tell us about your research activities and focus area.

My research work is mainly on improving sustainability and constructability of roller-compacted concrete.

What do you want to do after you graduate?

My dream job is allowing me to get my hands dirty to understand better how to improve concrete on multiple levels.





The Grainger College of Engineering

2023-2024 Fellowship Recipient

Illinois Concrete Industry Graduate Fellowship in Concrete Paving

Richa Bhardwaj

Department of Civil & Environmental Engineering

Area of Study: Transportation Engineering

Research Group: Roesler Research Group

Thank You!

For me, this fellowship symbolizes the construction industry's commitment to aiding its young members, particularly those engaged in research. Thanks to this fellowship, I've been able to continue my research for my Ph.D. studies as well as explore new green initiatives within the realm of concrete pavements. This year, I worked on thermoresponsive pavement materials for maintaining human thermal comfort in cities. I was also able to present this work at the 11th Annual International Conference on Urban Climate in Sydney.

What this fellowship has inspired in me, is a sense of gratitude toward the concrete paving community and a sense of duty toward future students to help them with necessary knowledge and tools.

Sincerely,
Richa Bhardwaj

Bachelor of Technology in Civil Engineering, 2012, NIT Hamirpur, India

Masters of Science in Civil Engineering, 2018, Texas A&M University, U.S.

Why did you want to be a Grainger Engineer?

Growing up in a small hilly village, I always appreciated the importance of infrastructure in individual and societal development and developed a fascination with the complex relationship between natural systems and human construction. The civil engineering field offered me a path where I could study this relationship and provide infrastructure-based solutions. The Department of Civil & Environmental Engineering and the research programs at The Grainger College of Engineering consistently served as invaluable sources of knowledge and inspiration throughout my early academic years. I consider myself really fortunate to be a member of the civil engineering community at UIUC.

Tell us about your research activities and focus area.

My primary research focus revolves around the development of concrete pavement materials aimed at reducing the adverse effects of urban overheating. This is achieved through the incorporation of various thermal and optically active substances. Given the pressing local and global consequences of climate change, my objective is to create materials and techniques that can be widely applied to introduce cool pavement solutions in urban environments on a large scale.

What do you want to do after you graduate?

I prefer to begin my career with a research-focused company, particularly one that specializes in cement-based construction materials. Subsequently, I plan to transition to a federal or state agency that actively implements real-time solutions related to cool pavement applications.

