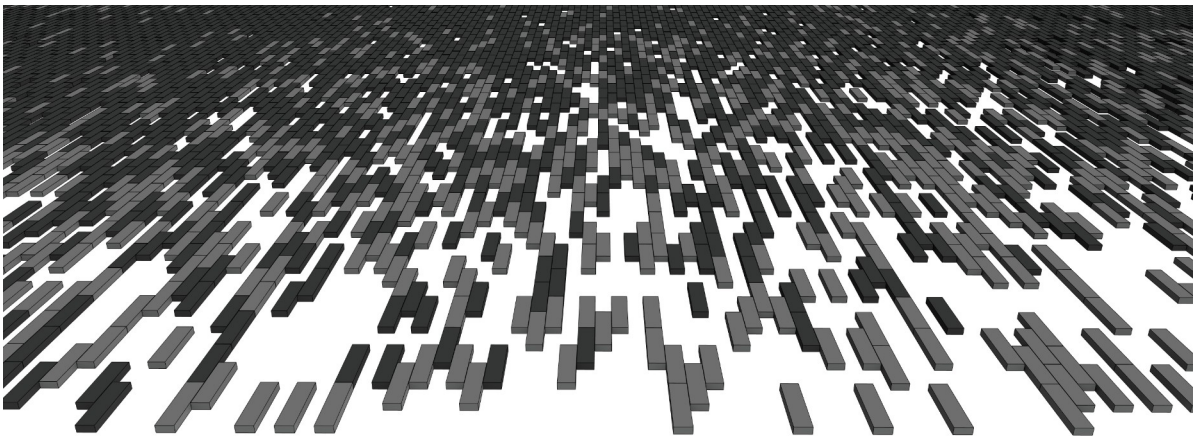
LA 4/589 Spring 2023

TECH STUDIO: Discrete Topographies

CRN 33526/33538 – Monday, Wednesday, Friday 1:00pm-4:50am in 308 LA Lawrence Hall

Instructor: **Ignacio López Busón**, ilopezbu@uoregon.edu (Office Lawrence 213)



Parametric Paving Gradient
Ignacio Lopez Buson, MAPS

> *"You could cover the whole earth with asphalt, but sooner or later green grass would break through."*
>
> — *Ilya Ehrenburg*

COURSE DESCRIPTION:

'Discrete Topographies' will focus on the critical role landscape architects should play in the design and implementation of paving systems to create functional, sustainable, and attractive outdoor spaces in contemporary cities. The studio will explore the latest trends and innovations in concrete paving systems, including the use of permeable pavements, and the integration of computational technologies throughout the entire design process, from conceptualization to construction documentation.

With the assistance of local pavement manufacturers, the students will study the physical properties of concrete, such as durability, strength, color, and permeability, and how these impact the design, performance, and maintenance of concrete pavers. This course includes a visit to the manufacturer factory to learn firsthand about the entire production process, including the construction of a 1-to-1 mock-up. In addition to exploring the technical aspects, the studio will also examine the environmental and social benefits of sustainable pavement design, including its importance in managing stormwater, reducing the urban heat island effect, promoting walkability and accessibility, and enhancing the overall quality of the built environment.

This studio will provide students with the skills and knowledge necessary to design and document a real-world paving project, and challenge them to consider the technical and aesthetic aspects of paving systems in the context of larger landscape design problems, such as sustainability and climate change resilience.

RECOMMENDED SOFTWARE:

Please, have the following software ready to use before the start of the course:

- **Rhino 6.0 or 7.0**
  Free 90-day trial. Download at https://www.rhino3d.com/
- **Autodesk Autocad**
  Free for UO Landscape Architecture students.
  Download at https://www.autodesk.com/education/edu-software/overview
- **Adobe Suite**
  Photoshop, Illustrator, InDesign. Subscription model.
  Download at: https://www.adobe.com/creativecloud/buy/students.html

SUGGESTED READING:

Brown, R. D., & Gillespie, T. J. Microclimatic landscape design: Creating thermal comfort and energy efficiency. Wiley. 1995

Cantrell, B., & Mekies, A. Codify: Parametric and computational design in landscape architecture. London: Routledge. 2018.

Design Workshop. Landscape Architecture Documentation Standards: Principles, Guidelines, and Best Practices. Wiley. 2015

Harris, C. Time-Saver Standards for Landscape Architecture. McGraw Hill. 1997

Hopper, L., Landscape Architectural Graphic Standards. Wiley. 2007

Olgyay, V., Design with climate: Bioclimatic approach to architectural regionalism. Princeton: Princeton University Press. 2015

Petschek, P., Grading for Landscape Architects. Birkhauser. 2008

Steiner, F., Planning and Urban Design Standards. Wiley. 2006

Strom, S., Nathan, K., Woland, J. Site Engineering for Landscape Architects. 2009

Walliss, Jillian, and Heike Rahmann. Landscape Architecture and Digital Technologies: Re-Conceptualising Design and Making. Routledge. 2016.

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