

Contents

Special Issue

Clive L. Dym Mudd Design Workshop XII: Designing Through Making Sketches, Drafting in Campus Facilities and Remotely

Guest Editor

Gordon G. Krauss – Harvey Mudd College, Claremont, CA, USA

Editorial	1691
<i>Ahmad Ibrahim</i>	
Guest Editorial	1692–1693
<i>Gordon G. Krauss</i>	
The Key Ideas of MDW XII: A Summary	1694–1703
<i>Gordon G. Krauss</i>	
Iterating Overnight: Using Cardboard to Teach Audio During a Pandemic	1704–1711
<i>Colin M. Gray, Christopher Wolford and Davin Huston</i>	
Student Perspectives of the Nature and Purpose of “Deep Modeling” as Situated Knowing	1712–1729
<i>Robin S. Adams and Asem Aboelzahab</i>	
The Impact of Appropriate Prototyping Tool Choices on Achieving Functionality for Novices	1730–1746
<i>Joshua D. Brandel, Andersen Chang and Matthew A. Wettergreen</i>	
CAD as a Virtual Prototyping Method: Uses and Timing of Computer-Aided Design Artifacts in Hardware Design	1747–1760
<i>Hannah Budinoff and Julia Kramer</i>	
Engineering Students’ Performance of Prototyping: Process, Purpose, and Perception in the Design Classroom	1761–1778
<i>Todd Fernandez and Martin Jacobson</i>	
Building Confidence and Embracing Failure Through Sketching Practice	1779–1790
<i>Madhurima Das and Maria Yang</i>	
Student Perception of Construction Problems and their Process Design Strategies	1791–1803
<i>Ali Shafaat and Farshid Marbouti</i>	
Community-Engaged Learning, Prototypes and Requirement Development	1804–1814
<i>William C. Oakes, Andrew Pierce, Jorge Martinez and Paul Leidig</i>	
Designing a Design-Driven Human-Centered Engineering Program	1815–1823
<i>Avneet Hira, Sunand Bhattacharya, Glenn Gaudette and Siddhartan Govindasamy</i>	
Understanding the Anchors Associated with Secondary School Students’ Engineering Design Experiences	1824–1835
<i>Adam R. Carberry, Medha Dalal and Olushola Emiola-Owolabi</i>	
Improving Engineering Sketching Education Through Perspective Techniques and an AI-Based Tutoring Platform	1836–1850
<i>Morgan B. Weaver, Samantha Ray, Ethan Clark Hilton, Denis Dorozhkin, Kerrie Douglas, Tracy Hammond and Julie Linsey</i>	
Predicting Success of Engineering Student Makers: Relationships Between Makerspace Involvement, Academic Performance, and Engineering Design Self-Efficacy	1851–1861
<i>Morgan B. Weaver, Ethan Hilton, Melissa W. Alemán, Robert Nagel and Julie Linsey</i>	
Experiences with Prototyping and Making in Virtual Classes	1862–1874
<i>Reid Bailey, Bethany M. Brinkman, Greg C. Lewin and Matthew Shields</i>	
A Small Rebellion: How to Catalyze Innovation Through Self Actualization	1875–1890
<i>Ade Mabogunje, Larry Leifer and Phillip Wickham</i>	
Semantic Fluency in Design Reasoning	1891–1903
<i>Jenny Quintana-Cifuentes and Senay Purzer</i>	
The SmithVent Experience and a Framework for Collaborative Distributed Design and Fabrication	1904–1922
<i>Susannah Howe, Eleanor Ory, Devin Carroll, Sarah Chu, Kalifa Clarke, Beatrix Dalton, Claire Dudek, Adrienne Horne, Nicholas Howe, Sangye Kazi, Astrid Landeau, Dan Lin, Phoebe Degroot, Emily Dixon, Farida Sabry and Alex Widstrand</i>	

Using Practitioner Strategies to Support Engineering Students' Intentional Use of Prototypes for Stakeholder Engagement During Front-End Design	1923–1935
<i>Ilka B. Rodriguez-Calero, Shanna R. Daly, Grace Burleson, Marianna Couleantianos and Kathleen H. Sienko</i>	
Cultural Influence on Providing Peer Feedback in an Engineering Design Course	1936–1952
<i>Gordon G. Krauss</i>	
Guide for Authors	1953