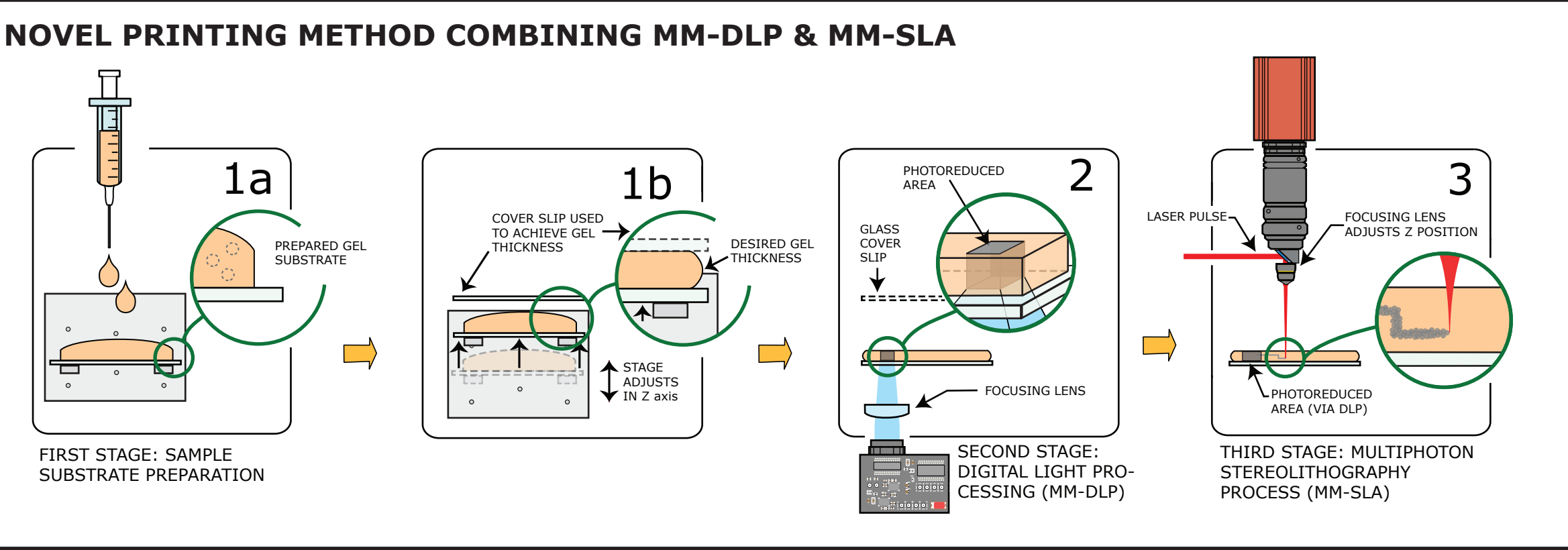


VISUALIZATIONS FOR ADVANCED 3D PRINTING METHODS

Semester: Summer 2024 Intersession
Student: Patricio Salomon-Mir
Instructor: Jorge Paricio Garcia, MID, HRM, PhD
Advisors: SeungYeon Kang PhD, UConn School of Mechanical, Aero space and Manufacturing Engineering

Patricio Salomon-Mir, a student from the School of Mechanical, Aero-space, and Manufacturing Engineering, led an innovative investigation into improving complex visualizations for 3D printing methods. Collaborating with faculty members Seung Yeon Kang and Jorge Paricio Garcia, Patricio's work is an integral part of a project funded by a grant from the Department of Defense (DOD).

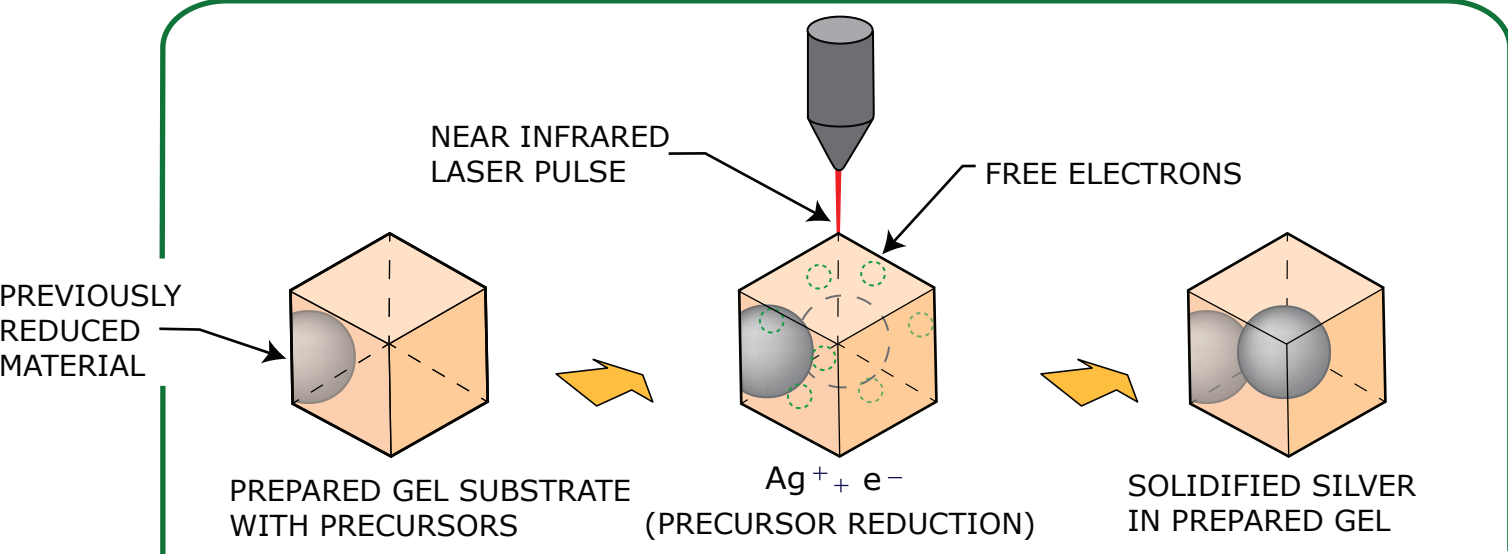
The project focused on enhancing the understanding of advanced 3D printing techniques, specifically Multi-material Multiphoton Stereolithography (MM-SLA) and Multi-material Digital Light Processing (MM-DLP), through the use of simplified figures.



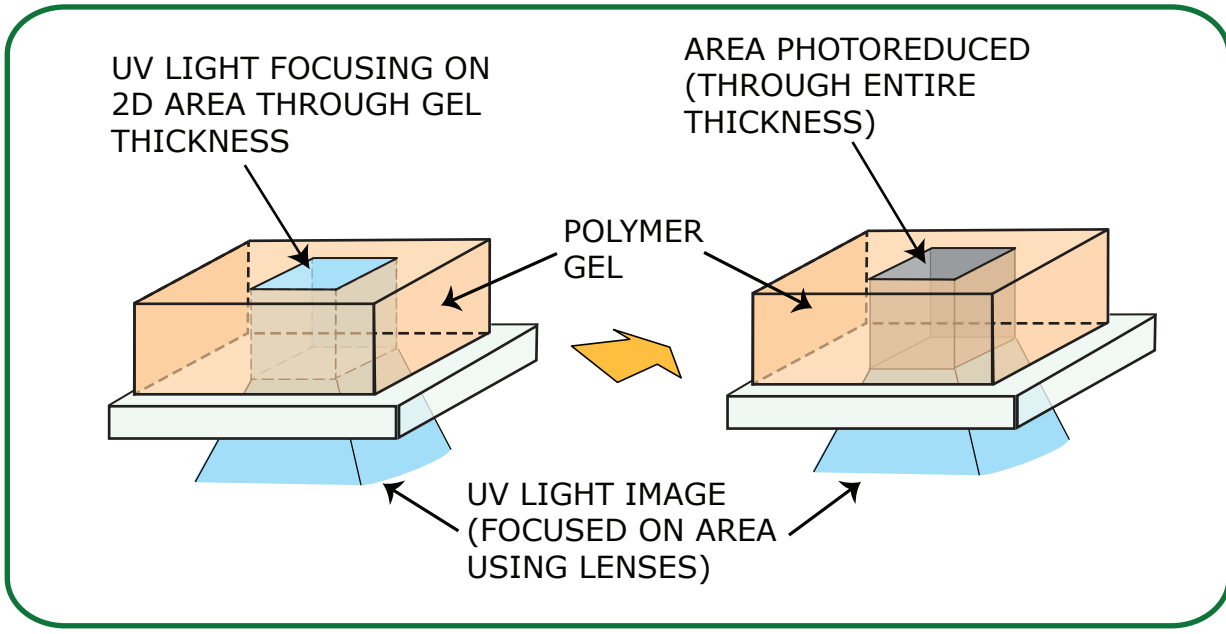
Patricio transformed the initial visuals into detailed, workable diagrams to illustrate these complex processes, with the help of many discussions and lab visitations. These visualizations are designed to be accessible to the general public, making complex 3D printing concepts comprehensible to a broader audience.

To achieve this, Patricio used visualization programs to build credible, informative diagrams that simplify the complexity of MM-SLA and MM-DLP methods. The work not only contributes to the academic field but also plays a key role in enhancing public understanding of advanced manufacturing technologies. The visualizations will be showcased as part of a grant presentation for the DOD, highlighting the innovations and potential applications in multi-material 3D printing technology.

MULTI-MATERIAL MULTIPHOTON STEREO LITHOGRAPHY (MM-SLA)



MULTI-MATERIAL DIGITAL LIGHT PROCESSING (MM-DLP)



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