Aja Hartman has a mechanical engineering Bachelor of Science degree from Santa Clara University and is working on her Master's degree in Materials Engineering. She has over 20 filed patent applications and 10 publications. Apart from her cutting-edge research in 3D print materials processing, she enjoys playing flute classics such as Bach and is learning ballet via the royal academy of YouTube. She is cooking her way through Costco recipe books and explores 2D to 3D transformations through her leatherwork. Learn more about her current work and projects at iamaja.com.

Aja Hartman

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Education

Santa Clara U, Graduate School of Engineering, Santa Clara Sept 2018 – Present

Santa Clara U, School of Engineering, Santa Clara Sept 2011 – June 2015
Graduated with a GPA of 3.892, magna cum laude, on the Dean's List of the School of Engineering annually, a member of the Tau Beta Pi Engineering Honors Society, Society of Women Engineers, Santa Clara University Orchestra, and One Step Ahead Volunteer.

Work Experience

3D Printing Research Engineer HP Labs 3D, Palo Alto July 2015 – Present
Researches process control effects on mechanical properties and chemical reactions of novel 3D printing agents on HP Multi Jet Fusion 3D printing platforms, current projects include optical, mechanical, and process control effects of plasticizer with different print parameters and material loading, both *Leading the Way* and *Best Disruption Reinventor* awards recipient

Manager (Summer Internship), Gilbane Construction, San Jose June 2014 – Sept 2014
Responsible for communication and coordination between the school owners, architects, and general contractors.

ME Designer (Summer Internship), Gov. Contractor, Palo Alto Sept 2013 – Sept 2014
Invented a solution to increase voting accuracy

Machine Shop Manager (Summer Internship), CMU, Moffett Field July 2013 – Sept 2013
Responsible for electrical and mechanical machine maintenance and machine certification for students and teachers.

Soft Skills

Culture, community, and team builder, self motivated, fast learner, good communicator, currios

Tools

Python, Solidworks, Creo, Materialize Magics, NetFabb, Microsoft Office Suite, ImageJ, WinSCP, PuTTY, MobaXterm, 3D printers, UV spectrometer, SEM, STM, EDX, tensile tester, density tester, Izod impact tester, hardness tester, laser cutter, mill, drill, lathe, soldering

Patents

Hartman A, Anthony T, Dispoto G, Huang W, Jangam J, Zhao L, Methods to track and trace 3D printed polymer objects using embedded magnetic nanoparticles, Application No. PCT/US2019/065676

Huang W, Hartman A, Olubummo P, A Method of Controlling Internal Voids in MJF Parts, Application No. PCT/US2019/065659

Hartman A, Jangam J, Zhao L, Metal 4D Printing Smart Self-assembly structures, Application No. PCT/US2019/055802

Hartman A, Huang W, Jangam J, Olubummo P, Wycoff K, Voxel Microstructure Printing with Multiple Property Modulation Agents on Multi Jet Fusion Platform, Application No. PCT/US2019/055501

Olubummo P, Hartman A, Thonet A, Zhao L, Novel method of digitally-controlled properties tailoring of 3D printed parts at macro and voxel level, Application No. 20315022.2

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Erickson K, Hartman A, Wittkopf J, Zhao L, Resumption of MJF Printing on Partially Printed Parts or on Objects Placed in an MJF Print Bed, Application No. PCT/US2019/034121

Olubummo P, Hartman A, Wycoff K, Zhao L, Engineering the properties of HP's MJF 3D parts via Epoxy/Amine Chemistry Application No. PCT/US2019/022756

Hartman A, Erickson K, Gottwals M, Olubummo P, Tastle I, Selective Control of Translucency in MJF Parts Using a Plasticizer Agent Application No. PCT/US2019/041805

Dockstader L, Hartman A, Woodlock D, Zhao L, Adding a readable label to the surface of a 3D printed object by varying the printing process, Application No. PCT/US2019/022473

Olubummo P, Hartman A, Zhao L, Tailoring the Mechanical property of PA12 using Epoxy/Amine Chemistry for HP's MJF 3D Printing Technology, Application No. PCT/US2018/052327

Hartman A, Baker M, Gottwals M, Ju A, Tastle I, Tom H, Zhao L, Method to Create Variable Opacity within Multi Jet Fusion Printed Parts Application No. PCT/US2018/065806

Erickson K, Hartman A, Olubummo P, Zhao L, Plasticizer Functional Agent for Improving the Density of Multi Jet Fusion Printed Parts, Application No. PCT/US2018/022667

Erickson K, Hartman A, Olubummo P, Tom H, Zhao L, Method to Create Variable material Property within Multi Jet Fusion Printed Parts, Application No. PCT/US2017/041370

Hartman A, Zhao L, Thermal Control of Multi-Absorption 3D Printing Agents, Application No. PCT/US2017/013914

Olubummo P, Hartman H, Tom H, Zhao L, New formulation with Nickel Bis(Dithiolene)salt for HP's MJF 3D Printing, Application No. PCT/US2017/058122

Erickson K, Hartman A, Olubummo P, Zhao L, Plasticizing polyamide-12 on demand during MJF 3D Printing, Application No. PCT/US2017/039776

Olubummo P, Harman A, Zhao L, Novel method to formulate thermal inkjettable Metal Bis(Dithiolene) fusing agent , Application No. PCT/US2017/027881

Olubummo P, Erickson K, Hartman A, Tom H, Zhao L, Novel Ink vehicle formulation for HP multi jet fusion 3D printing, Application No. PCT/US2017/016674

Olubummo P, Erickson K, Hartman A, Tom H, Zhao L, Nickel Bis(Dithiolene) Based Activating Fusing Agent for HP's MJF 3D Printing of White Parts, Application No. PCT/US2017/016681

Olubummo P, Hartman A, Tom H, Zhao L, Zhao Y, Method to enable white capability, Application No. PCT/US2017/016679

Zhao Y, Chaffins S, DeKam K, Erickson K, Hartman A, Zhao L, MJF Printed Electronics, Application No. PCT/US2016/044214

Erickson K, Fitzhugh A, Hartman A, Tom H, Zhao Y, Zhao L, The Mechanical Property Voxel: Agents and Methods, Application No. PCT/US2016/032027

Nauka K, Hartman A, Kasperchik V, Method for Surface Finishing of the MJF Polymer Parts, Application No. PCT/US2016/030941

Hartman H, Nauka K, Zhao L, Ultraviolet Light Absorber for 3D Printing White Plastic Parts, Application No. PCT/US2016/059693

Hartman H, Zhao L, Method to Quality Control of HP Multi Jet Fusion Printed Parts, Application No. PCT/US2016/044755

Publications

Hartman A, Nauka K, 3D Printing of Polymers with Xenon Flash Lamp, Solid Freeform Fabrication Symposium 2019

Hartman A, Zhao L, Olubummo P, Scalability of Activating Fusing Agent for Enabling Multi-Color and Translucent 3D Printing with Multi Jet Fusion, Halftoning Printing Imaging Content Symposium 2018

Hartman A, Zhao L, Method to Voxel Control Variable Fusing Ability for Multi-Characteristic 3D Printing with MJF, Halftoning Printing Imaging Content Symposium 2018

Erickson K, Hartman A, Olubummo P, Tom H, Zhao L, Mechanical Voxel: Creating Variable Rigidity in MJF Printed Parts, Chemist Summit 2017

Hartman A, Olubummo P, Zhao L, Nickel Dithiolene Based Fusing Agent for HP's MJF 3D Printing of White Parts, Chemist Summit 2017

Chaffins S, Erickson K, Hartman A, Tom H, Zhao L, The Conductive Voxel: Conductive Features within Polymer Parts Using MJF, Solid Freeform Fabrication Symposium 2017

Erickson K, Esparch C, Hartman A, Olubummo P, Zhao L, The Mechanical Voxel: Variable Rigidity Polymer Parts Using MJF, Solid Freeform Fabrication Symposium 2017

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Hartman A, Zhao L, Pattern Recognition Method to Qualifying HP Multi Jet Fusion Printing and Printed Parts, Halftoning Printing Imaging Content Symposium 2016

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