Aja Hartman

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Introduction

I am materials scientist and mechanical engineer with over five years' experience in the digital manufacturing industry. I love exploring materials processing both in my career and through personal projects and cooking.

Education

2018–2021 **Master of Science**, *Santa Clara University*, Santa Clara, CA.
Materials Engineering

Relevant courses: Medical device design, modern instrumentation and experiments, IC fab processes, atomic arrangement defects and mechanical behavior, electrical structure and properties, fracture mechanics and fatigue, elasticity

2011–2015 **Bachelor of Science**, *Santa Clara University*, Santa Clara, CA.
Mechanical Engineering
Graduated with a 3.9 GPA and Magna Cum Laude, Dean's List of the School of Engineering annually.

Experience

2015–current **Research Engineer**, *HP Labs*, Palo Alto, CA.
Combining mechanical architecture, material science, and 3D print processing to further Multi Jet Fusion technology. Metrology specialist with ASTM and ISO standards for material characterization, defining standard reference measurements (SRM), and standard operating procedures (SOP) across sites.

2014 **Manager Intern**, *Gilbane Construction*, San Jose, CA.
Responsible for communication and coordination between the property owners, architects, and general contractors.

2013–2014 **ME Designer**, *Gov. Contractor*, Palo Alto, CA.
Invented a solution to increase voting accuracy.

2013 **Machine Shop Manager Intern**, *Carnegie Mellon University*, Moffet Field.
Responsible for electrical and mechanical machine maintenance and machine certification for students and teachers.

Tools

SolidWorks, Creo, MATLAB, Materialize Magics, Netfabb, ImageJ, 3D printers, UV spectrometer, SEM, STM, EDX

Memberships

Tau Beta Pi Engineering Honor's Society, Society of Women in Engineering,
American Society of Mechanical Engineers

Issued Patents

U.S. Patent 10832394, "Build material layer quality level determination", Issued Nov 20, 2020
U.S. Patent 10857733, "Three-dimensional (3D) printing with discolorable near-infrared absorbing dye", Issued Dec 8, 2020
U.S. Patent 10781228, "Fusing agent including a metal bis(dithiolene) complex", Issued Nov 22, 2020
U.S. Patent 10647053, "Three-dimensional (3D) printing", Issued May 12, 2020

Patent Applications

U.S. 20190134898, "Forming three-dimensional (3d) electronic parts", Published May 09, 2019
U.S. 20190030803, "Finishing a 3d printed object", Published Jan 31, 3019
U.S. 20190054699, "Build layer temperature control", Published Feb 21, 2019
U.S. 20190382420, "Fusing agent(s)", Published Dec 19, 2019
W.O. 2019005044, "Three-dimensional printed part", Published Jan 03, 2019
W.O. 2018080537, "3d printer with a uv light absorbing agent", Published May 03, 2018
U.S. 20190054702, "Deviant control in additive manufacturing", Published Feb 21, 2019
U.S. 20190048219, "Fusing agent including a tetraphenyldiamine-based dye", Published Feb 14, 2019
W.O. 2020122950, "Opacifying agent application in three-dimensional printing", Published Feb 18, 2020
W.O. 2020190335, "Three-dimensional object formation", Published Sep 24, 2020
E.P. 3625031, "Temperature control in 3d object formation", Published Jan 13, 2021
W.O. 2020242451, "Interrupted additive manufacturing", Published Dec 03, 2020
W.O. 2021010961, "Three-dimensional printing", Published Jan 21, 2021
W.O. 2020190258, "Patterns in additive manufacturing", Published Sep 24, 2020
W.O. 2020190334, "Impression en trois dimensions", Published Sep 24, 2020
E.P. 3762211, "Impression en trois dimensions", Published Jan 13, 2021
W.O. 201908351, "Agenent de fusion comprenant un sel metallique de bis(dithiolene)", Published May 02, 2019
W.O. 201917761, "Impression en trois dimensions," Published Sep 19, 2019

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
Erickson K, Esparch C, Hartman A, Tom H, Zhao L, The Mechanical Property Voxel: Mechanical Tailoring Agents for Modifying Mechanical Properties of MJF Parts at a Voxel Level, Halftoning Printing Imaging Content Symposium 2016
Hartman A, Zhao L, Pattern Recognition Method to Qualifying HP Multi Jet Fusion Printing and Printed Parts, Halftoning Printing Imaging Content Symposium 2016
Goyette G, Hartman A, Hereford S, Montgomery H, Proof of Concept Planetary Lander Test Article, International Planetary Probe Workshop 2015