# References

[1] N. Bausch, D. P. Dawkins, R. Frei, and S. Klein, “3D Printing onto Unknown Uneven Surfaces\*\*This work is supported by the University of Portsmouth – Research Development Framework (RDF) 2015.,” IFAC-PapersOnLine, vol. 49, no. 21, pp. 583–590, Jan. 2016.

[2] N. Bausch, D. P. Dawkins, and R. Frei, “InSPIREd - advances in Conformal Printing: 3D printing onto unknown uneven surfaces,” in 2017 IEEE International Conference on Advanced Intelligent Mechatronics (AIM), Munich, Germany, 2017, pp. 430–435.

[3] Alex Derber, “Next Steps For Using Additive Manufacturing For Repairs,” MRO-Network, 11-Jul-2019. [Online]. Available: https://www.mro-network.com/emerging-technology/next-steps-using-additive-manufacturing-repairs. [Accessed: 16-Oct-2019].

[4] D. King, “SPACE SERVICING: PAST, PRESENT AND FUTURE,” 2001.

[5] M. Doran, R. Sterritt, and G. Wilkie, “Autonomic Self-Adaptive Robot Wheel Alignment,” p. 7, 2016.

[6] National Aeronautics and Space Administration. NASA: Meet The Swarmies-Robotics Answer To Bugs. [Online]. Available from: <https://www.nasa.gov/content/meet-the-swarmies-robotics-answer-to-bugs>

[7] J. Iqbal, H. Khan, and M. Raza Ul Islam, “Modeling and Analysis of a 6 DOF Robotic Arm Manipulator,” vol. 3, no. 6, p. 8, 2012.

[8] S. N. Cubero, “Blind Search Inverse Kinematics for Controlling All Types of Serial-link Robot Arms,” in Mechatronics and Machine Vision in Practice, J. Billingsley and R. Bradbeer, Eds. Berlin, Heidelberg: Springer Berlin Heidelberg, 2008, pp. 229–244.

[9] V. Potkonjak, S. Tzafestas, D. Kostic, and G. Djordjevic, “Human-like behavior of robot arms: general considerations and the handwriting task—Part I: mathematical description of human-like motion: distributed positioning and virtual fatigue,” Robotics and Computer-Integrated Manufacturing, vol. 17, no. 4, pp. 305–315, Aug. 2001.

[10] N. G. Hockstein, J. P. Nolan, B. W. O’Malley, and Y. J. Woo, “Robot-Assisted Pharyngeal and Laryngeal Microsurgery: Results of Robotic Cadaver Dissections,” The Laryngoscope, vol. 115, no. 6, pp. 1003–1008, 2005.

[11] C. Gosselin, R. Duballet, Ph. Roux, N. Gaudillière, J. Dirrenberger, and Ph. Morel, “Large-scale 3D printing of ultra-high performance concrete – a new processing route for architects and builders,” Materials & Design, vol. 100, pp. 102–109, Jun. 2016.

[12] R. Weskamp and M. R. Tennerstedt, “Quick change coupling system for robotic attachments,” US4906123A, 06-Mar-1990.

[13] Robotic Tactile Sensor System and Applications - IEEE Journals & Magazine,<https://ieeexplore.ieee.org/abstract/document/5229258/figures#figures>.

[14] Schubert, Carl, et al. “Innovations in 3D Printing: a 3D Overview from Optics to Organs.” British Journal of Ophthalmology, BMJ Publishing Group Ltd, 1 Feb. 2014, https://bjo.bmj.com/content/98/2/159.

[15] “3D Printed Previews for Fast Prototyping.” WirePrint, ACM, https://dl.acm.org/citation.cfm?id=2647359.

[16] L. Zhou, S. Bai, and M. R. Hansen, “Design optimization on the drive train of a light-weight robotic arm | Elsevier Enhanced Reader,” Mechatronics, vol. 21, no. 3, pp. 560–569, Apr. 2011.

[17] US9261172B2 - Multi-ply strap drive trains for surgical robotic arms. (n.d.). Retrieved from <https://patents.google.com/patent/US9261172B2/en>.

[18] G. S. Chirikjian and J. W. Burdick, "A hyper-redundant manipulator," in *IEEE Robotics & Automation Magazine*, vol. 1, no. 4, pp. 22-29, Dec. 1994. doi: 10.1109/100.388263

[19] G. Hirzinger, A. Albu-Schaffer, M. Hahnle, I. Schaefer, and N. Sporer, “On a new generation of torque controlled light-weight robots,” in Proceedings 2001 ICRA. IEEE International Conference on Robotics and Automation (Cat. No.01CH37164), 2001, vol. 4, pp. 3356–3363 vol.4.

[20] D. A. Saravanos and J. S. Lamancusa, “Optimum structural design of robotic manipulators with fiber reinforced composite materials,” Computers & Structures, vol. 36, no. 1, pp. 119–132, Jan. 1990.

[21] B. Champion, M. Jamshidi, and M. Joordens, “Increased functionality of an underwater robotic manipulator,” in 2016 11th System of Systems Engineering Conference (SoSE), 2016, pp. 1–6.

[22] J. A. Paulsen, M. Renn, K. Christenson, and R. Plourde, “Printing Conformal Electronics on 3D Structures with Aerosol Jet Technology,” IEEE Explore, 2012.

[23] S. Maktabi and P. R. Chiarot, “Electrohydrodynamic Printing of Organic Polymeric Resistors on Flat and Uneven Surfaces,” Journal of Applied Physics, Aug. 2016.

[24] S. Jasveer and X. Jianbin, “Comparison of Different Types of 3D Printing Technologies,” International Journal of Scientific and Research Publications, vol. 8, no. 4, Apr. 2018.

[25] “2019 3D Printer Extruder Guide,” All3DP, 21-Aug-2019. [Online]. Available:<https://all3dp.com/1/3d-printer-extruder-nozzle-guide/>. [Accessed: 07-Oct-2019].

[26] T. Landry, “Extruders 101: A crash course on an essential component of your 3D printer,” MatterHackers. [Online]. Available: https://www.matterhackers.com[/articles/extruders-101:-a-crash-course-on-an-essential-component-of-your-3d-printer](https://doi.org//articles/extruders-101:-a-crash-course-on-an-essential-component-of-your-3d-printer). [Accessed: 07-Oct-2019].

[27] 3DAddict, “The Extruder Which One to Choose for your 3D Printer,” 3DAddict, 14-Jul-2017.

[28] “Bowden Vs Direct: Quest for the Best 3D Printer Extruder,” 3D Printer Power, 17-Jan-2018.[Online].Available:<https://3dprinterpower.com/bowden-extruder-vs-direct-extruder-showdown/>. [Accessed: 07-Oct-2019].

[29] T. Yao, Z. Deng, K. Zhang, and S. Li, “A method to predict the ultimate tensile strength of 3D printing polylactic acid (PLA) materials with different printing orientations,” Composites Part B: Engineering, vol. 163, pp. 393–402, Apr. 2019.

[30] I. Kocserha and F. Kristály, “Effects of Extruder Head’s Geometry on the Properties of Extruded Ceramic Products,” MSF, vol. 659, pp. 499–504, Sep. 2010.

[31] J. Kentzer, B. Koch, M. Thiim, R. W. Jones, and E. Villumsen, “An open source hardware-based mechatronics project: The replicating rapid 3-D printer,” in 2011 4th International Conference on Mechatronics (ICOM), Kuala Lumpur, Malaysia, 2011, pp. 1–8.

[32] J. R. Kubalak, “Design and Realization of a 6 Degree of Freedom Robotic Extrusion Platform,” p. 19.

[33] O. Akyol and Z. Duran, “Low-Cost Laser Scanning System Design,” J Russ Laser Res, vol. 35, no. 3, pp. 244–251, May 2014.

[34] S. Winkelbach, S. Molkenstruck, and F. M. Wahl, “Low-Cost Laser Range Scanner and Fast Surface Registration Approach,” in Pattern Recognition, 2006, pp. 718–728.

[35] D. Banerjee, K. Yu, and G. Aggarwal, “Robotic Arm Based 3D Reconstruction Test Automation,” IEEE Access, vol. 6, pp. 7206–7213, 2018.

[36] M. Levoy et al., “The Digital Michelangelo Project: 3D Scanning of Large Statues,” in Proceedings of the 27th Annual Conference on Computer Graphics and Interactive Techniques, New York, NY, USA, 2000, pp. 131–144.

[37] Cracknell, Arthur P.; Hayes, Ladson. Introduction to Remote Sensing (2 ed.). London: Taylor and Francis, 2007.

[38] J. Carter, K. Schmid, et al., “Lidar 101: An Introduction to Lidar Technology, Data, and Applications,” National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center. Charleston, SC, 2012.

[39] W. Boehler and A. Marbs, “3D Scanning Instruments,” International Society for Photogrammetry and Remote Sensing

[40] H. Zuowei, H. Yuanjiang, and H. Jie, “A Method for Noise Removal of LIDAR Point Clouds,” in 2013 Third International Conference on Intelligent System Design and Engineering Applications, 2013, pp. 104–107.

[41] W. Boehler and A. Marbs, “3D SCANNING INSTRUMENTS,” p. 4, 2002.

[42] D. Eberly, “Dynamic Collision Detection using Oriented Bounding Boxes,” Magic Software, Inc., Mar. 1999.

[43] M. De Geir, “Control of a robotic arm: Application to on-surface 3D-printing.” 2015.

[44] Gottschalk, Stefan, Ming C. Lin, and Dinesh Manocha, “OBBTree: A hierarchical structure for rapid interference detection,” in Proceedings of the 23rd annual conference on Computer graphics and interactive techniques, 1996, pp. 171–180.

[45] Ahlers D, Wasserfall F, Hendrich N, Zhang J. 3D printing of nonplanar layers for smooth surface generation. IEEE 15th International Conference on Automation Science and Engineering (CASE). 2019:1737-1743.

[46] Alessia Romani, Andrea Mantelli, Paolo Tralli, Stefano Turri, Marinella Levi, Raffaella Suriano, Metallization of Thermoplastic Polymers and Composites 3D Printed by Fused Filament Fabrication, Technologies, 10.3390/technologies9030049, 9, 3, (49), (2021).