



# OLA HARRYSSON

Professor & Fitts Fellow in Biomedical Manufacturing

## POSITIONS

**Co-Director of Laboratory for Additive Manufacturing and Logistics**  
North Carolina State University, Raleigh, NC

## RECENT & RELEVANT PUBLICATIONS

Spearman, S. S., Irin, F., Ramesh, S., Rivero, I. V., Green, M. J., & Harrysson, O. L. A. (2019). Effect of pseudomonas lipase enzyme on the degradation of polycaprolactone/polycaprolactone-polyglycolide fiber blended nanocomposites. *INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS*, 68(7), 360–367. <https://doi.org/10.1080/00914037.2018.1445633>

Webster, C. E., Marcellin-Little, D. J., Koballa, E. M., Stallrich, J. W., & Harrysson, O. L. A. (2019). Evaluation of the geometric accuracy of computed tomography and microcomputed tomography of the articular surface of the distal portion of the radius of cats. *AMERICAN JOURNAL OF VETERINARY RESEARCH*, 80(10), 976–984. <https://doi.org/10.2460/ajvr.80.10.976>

Mahbooba, Z., Thorsson, L., Unosson, M., Skoglund, P., West, H., Horn, T., ... Harrysson, O. (2018). Additive manufacturing of an iron-based bulk metallic glass larger than the critical casting thickness. *Applied Materials Today*, 11, 264–269. <https://doi.org/10.1016/j.apmt.2018.02.011>

Seifi, M., Dahar, M., Aman, R., Harrysson, O., Beuth, J., & Lewandowski, J. J. (2018). Correction to: Evaluation of Orientation Dependence of Fracture Toughness and Fatigue Crack Propagation Behavior of As-Deposited ARCAM EBM Ti-6Al-4V, *JOM*, 70(3), 436–436. <https://doi.org/10.1007/s11837-018-2736-0>

Basinger, K. L., Keough, C. B., Webster, C. E., Wysk, R. A., Martin, T. M., & Harrysson, O. L. (2018). Development of a modular computer-aided process planning (CAPP) system for additive-subtractive hybrid manufacturing of pockets, holes, and flat surfaces. *International Journal of Advanced Manufacturing Technology*, 96(5-8), 2407–2420. <https://doi.org/10.1007/s00170-018-1674-x>

Ruppert, D. S., Harrysson, O. L. A., Marcellin-Little, D. J., Dahners, L. E., & Weinhold, P. S. (2018). Improved osseointegration with as-built electron beam melted textured implants and improved peri-implant bone volume with whole body vibration. *MEDICAL ENGINEERING & PHYSICS*, 58, 64–71. <https://doi.org/10.1016/j.medengphy.2018.05.003>

Mahbooba, Z., West, H., Harrysson, O., Wojcieszynski, A., Dehoff, R., Nandwana, P., & Horn, T. (2017). Effect of hypoeutectic boron additions on the grain size and mechanical properties of Ti-6Al-4V manufactured with powder bed electron beam additive manufacturing. *JOM: the Journal of the Minerals, Metals & Materials Society*, 69(3), 472–478. <https://doi.org/10.1007/s11837-016-2210-9>

Eldesouky, I., Harrysson, O., West, H., & Elhofy, H. (2017). Electron beam melted scaffolds for orthopedic applications. *Additive Manufacturing*, 17, 169–175. <https://doi.org/10.1016/J.ADDMA.2017.08.005>

## PROFILE

Dr. Ola Harrysson has been involved in biomodeling since 1997 when he was a Ph.D. student at the University of Central Florida.

In January of 2002 Dr. Harrysson joined the faculty in the Fitts Department of Industrial and Systems Engineering at North Carolina State University as an Assistant Professor. He is currently the Director of the Center for Additive Manufacturing and Logistics (CAMAL) housed by the ISE department, which houses the first Electron Beam Melting (EBM) machine in the world. CAMAL is currently involved in research with numerous industries as well as providing faculty and students with prototyping services. Most of the aerospace-related research involves process and material development for the EBM systems while the medical research is concentrated on custom design and direct metal fabrication of novel implants and development new treatment methods.

Dr. Harrysson has been working for over 18 years with his colleague, Dr. Denis Marcellin-Little, who was an orthopedic surgeon at the College of Veterinary Medicine until 2018. They are developing new and innovative implant and surgical solutions. The two have pioneered the area of Transdermal Osseointegrated Prosthetics, which is a type of a prosthetic limb that is directly attached to the bone in the stump instead of using an external socket.

## Contact

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