Ola Harrysson | North Carolina State University

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Present

Medical Applications of Additive Manufacturing and Materials Development

Dr. Ola Harrysson

North Carolina State University

Medical applications of additive manufacturing has been in use for over 20 years. Early on AM technologies were used to print plastic models for surgical planning and training. However, when direct metal AM printers became available custom implant design and fabrication became a reality. The first part of this talk will highlight some of the medical applications that we are working on at NC State University. Further, some new material development for direct metal additive manufacturing processes will be demonstrated that applies to both the medical and the aerospace industries as well as other emerging fields.

Dr. Ola L. A. Harrysson joined the ISE Department at North Carolina State University in Raleigh, North Carolina in 2002 after receiving his Ph.D. in Industrial Engineering from the University of Central Florida in Orlando, Florida. Prior to attending the University of Central Florida he was born and raised in Sweden and received his bachelor's degree in Mechanical Engineering from Dala University. He has been conducting research in Rapid Prototyping and Additive Manufacturing for over 15 years. His main areas of research are medical application of additive manufacturing technologies, custom design and fabrication of orthopedic implants, medical device development, and materials development for Direct Metal Additive Manufacturing technology. Dr. Harrysson is the Co-Director of the Center for Additive Manufacturing and Logistics at NC State University. The Center houses a number of polymer and metal additive manufacturing technologies. Dr. Harrysson is currently a full professor in the Fitts Department of Industrial and Systems Engineering at NC State University and a Fitts Faculty Fellow in Biomedical Manufacturing. Further, he has affiliated appointments in the Department of Biomedical Engineering and the Department of Material Science and Engineering.

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Porter Hall 100 | 1:00pm