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We are looking for a postdoctoral associate in the area of metamorphic manufacturing, also known as digital forming. The postdoctoral associate will work with Professor Robert Landers, Collegiate Professor of Advanced Manufacturing, in the Aerospace and Mechanical Engineering Department at the University of Notre Dame. Metamorphic manufacturing is numerically controlled, incremental forming of parts to achieve complex shapes and tailored engineering properties. This method does not require custom tools and dies, which substantially decreases cost and lead time. Also, compared to additive manufacturing, metamorphic manufacturing has less material waste, is more energy efficient, uses materials already tailored to the process, can produce parts with superior properties, and resulting parts will be easier to certify.

The postdoctoral associate will work on the forefront of this new research area. Research topics include control-oriented modeling of thermo-mechanical deformation processes, iterative control of part placement and deformation as incrementally processing steps, digitized process planning, etc. They will have the opportunity to design and build one of the world's most sophisticated metamorphic manufacturing machines. Additionally, they will have opportunities to collaborate with other researchers at the University of Notre Dame exploring such topics as additive manufacturing of glass, carbon/carbon compositive manufacturing, and additive manufacturing of nanocrystals, and to become involved in industrial collaborations with local and state industries. The postdoctoral associate will help oversee a team consisting of multiple graduate and undergraduate students.

Required qualifications include a PhD in Mechanical Engineering (or a related field), background in automation and control systems (theory and application), and excellent communication skills. Desirable qualifications include experience building real-time control systems and in modeling and controlling manufacturing processes. Interested candidates should send their CV and a cover letter describing their background and qualifications to Professor Landers (rlanders@nd.edu). Professor Landers is committed to the career development of the postdoctoral associate. Applications will be reviewed as they are received.

EEO/AA Policy
Equal Employment Opportunity Statement
The University of Notre Dame seeks to attract, develop, and retain the highest quality faculty, staff and administration. The University is an Equal Opportunity Employer committed to building a culturally diverse workplace. We strongly encourage applications from female and minority candidates. Moreover, Notre Dame prohibits discrimination against veterans or disabled qualified individuals and requires affirmative action by covered contractors to employ and advance veterans and qualified individuals with disabilities in compliance with 41 CFR 60-741.5(a) and 41 CFR 60-300.5(a).