Abstract: In recent years, advanced manufacturing is “hot”. It has been one of the Federal science and technology priorities for several years in a row. Federal agencies have spent hundreds of millions of dollars to build the National Network of Manufacturing Innovation. NSF’s Manufacturing Machines and Equipment program has tripled its size (measured by the number of proposals). Universities have hired (or plan to hire) hundreds of manufacturing faculty members. This talk will present research opportunities in advanced manufacturing for both universities and individuals. It will briefly describe opportunities for universities to establish research centers, such as Manufacturing Innovation Institutes, as well as NSF Engineering Research Centers and Industry/University Cooperative Research Centers. It will also discuss several emerging research areas where significant investments are expected and breakthroughs can have long lasting impacts to society. Examples are additive manufacturing for health (including bioprinting), and cybermanufacturing.

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