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**Thesis title**: *The Application of Systems Engineering to a Space-based Solar Power Technology Demonstration Mission*

**About thesis:**This thesis presents an end-to-end example of systems engineering through the development of a Space-based Solar Power Satellite (SSPS) technology demonstration mission. As part of a higher education effort by NASA to promote systems engineering in the undergraduate classroom, the purpose of this thesis is to provide an educational resource for faculty and students. NASA systems engineering processes are tailored and applied to the development of a conceptual mission in order to demonstrate the role of systems engineering in the definition of an aerospace mission. The choice of developing an SSPS system, which is a renewable energy system, adds further relevance and serves to highlight the importance of systems engineering to global issues and engineering challenges.

**About Me:**Julien Chemouni Bach first studied physics and astronomy as an undergraduate at Tufts University, before pursuing a Masters Degree in aerospace engineering at the University of Texas at Austin.  It was as a student in the Space Systems Engineering class that he discovered systems engineering. He was immediately drawn to the big-picture thinking involved in systems engineering, and the fundamental role it plays in transforming a concept or idea into a physical application.

Julien was a teaching assistant for the Space Systems Engineering class for five semesters, and the partner Spacecraft Systems Laboratory class for one semester. This interest in systems engineering culminated in his thesis, The Application of Systems Engineering to a Space-based Solar Power Technology Demonstration Mission.