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On Tuesday, November 19, Noon - 1:00 p.m., Section 367 will present "Quantum Computing - The Final Frontier?" featuring Dr. Colin Williams of the Ultra Computing Technologies group, in the 167 Conference Room.

As NASA spacecraft explore deeper into the cosmos speed of light limited signal delays make it impractical to command missions from Earth. Future spacecraft will need greater onboard computing capacity to mimic human-level intelligence and autonomy. One route to increasing such computing power is to turn to quantum computers. More than merely ultra-small computers, quantum computers can harness counter-intuitive physical effects not available to conventional computers to allow them to run entirely new kinds of algorithms and solve certain problems exponentially faster than is currently believed possible. In this talk Dr. Williams will review the state of the art in quantum computing including algorithms for factoring integers, performing search, and solving NP-Complete problems. He will also review the most promising approaches to quantum computing hardware being built at JPL and elsewhere.

This lecture is sponsored by the Exploration Systems Autonomy Section.

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