

The
Astrobiology Program
at the University of Washington
presents

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**Earth System Analysis: Applications to
Astrobiology**

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2:30 pm

A-118 Physics/Astronomy Auditorium

A general model for the global carbon cycle of the Earth containing the reservoirs mantle, ocean floor, continental crust, biosphere, and the kerogen, as well as the combined ocean and atmosphere reservoir is presented. The model is specified by introducing three different types of biosphere: procaryotes, eucaryotes, and complex multicellular life. We can calculate the co-evolution of the geo- and biosphere from the Archaean to the long-term future. A simplified Earth system model can be used for the investigation of the habitable zone in the solar system and in exoplanetary systems.