Current Research Projects and Collaborators

Extrasolar Planets

- Habitable planet formation in extrasolar planetary systems
  [binary systems, systems with hot jupiters, multi-planet systems]

- Formation and detection of habitable Super-Earths
  [collaboration with Steinn Sigurdsson (Penn State)]

- Formation and detection of terrestrial planets in binaries
  [collaboration with John Chambers (Carnegie/DTM)]

- Detection of debris disks in and around binary star systems
  [collaboration with John Stansberry Univ. Arizona), David Thrilling (Univ. Arizona),
  Steve Kortenkamp (PSI), Eric Jensen (Swarthmore College), Robert Mathieu (JPL)]

- Detection of close-in terrestrial planets via transit timing method
  [collaboration with Eric Agol (Univ. Washington), Jason Steffan (Fermi Lab)]

- The dynamical evolution of extrasolar multiple body systems
  [collaboration with Jeffery Sudol (West Chester University)]

- Extrasolar Trojans and their habitability
  [collaboration with Krzysztof Gozdiewski, Torun Center for Astronomy, Poland]

Solar System Dynamics and Formation

- Dust dynamics in gaseous nebulae and planetesimal formation

- Dynamics and accretion of planetesimals in the gaseous envelope of protogiant planets
  [collaboration with Morris Podolak (Univ. Tel Aviv)]

- Parent bodies of iron meteorites and the dynamical evolution of asteroid belt
  [collaboration with Ed Scott (Univ. Hawaii/HIGP)]

- Mechanisms of the delivery of water to Earth and Main Belt Comets
  [collaboration with David Jewitt (Univ. Hawaii/IFA) and Karen Meech (Univ. Hawaii/IFA)]

- Dynamics and origin of irregular satellites and Trojans
  [collaboration with David Jewitt (Univ. Hawaii/IFA)]

- Dynamical evolution of protolunar disk and its connection with the evolution of asteroid belt
  [collaboration with Jeff Taylor and Ed Scott (Univ. Hawaii/HIGP)]