

CURRICULUM VITAE – MATIJA ČUK

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Degrees

- 2002-2005** Ph. D. (Astronomy) Cornell University
Thesis title: “Dynamics and Origin of the Irregular Satellites of the Giant Planets” (Graduate Adviser: J. A. Burns).
- 1999-2002** Master of Science (Astronomy), Cornell University
- 1995-1999** Diploma in Astrophysics (B. Sc. equivalent),
University of Belgrade, Serbia.

Employment

- Sep 2011-** Principal Investigator, SETI Institute
- Sep 2011-June 2012** Postdoctoral Researcher, Harvard University
- Nov 2009-May 2011** Clay Fellow, Smithsonian Astrophysical Observatory
- May 2008-Nov 2009** Daly Postdoctoral Fellow, Harvard University
- Sep 2006-May 2008** CITA National Fellow, U. of British Columbia
- Jan 2005-Aug 2006** Postdoctoral Research Associate, U. of British Columbia

Prizes and Awards

- 2007** Clay Postdoctoral Fellowship, Smithsonian Astrophysical Observatory
- 2007** Daly Postdoctoral Fellowship, Harvard University
- 2006** Canadian Institute for Theoretical Astrophysics National Fellowship
- 2004** Eleanor York prize for public service in astronomy (Cornell U.)
- 2002** AAS Division of Dynamical Astronomy Student Stipend
- 1999** Zaharije Brkić award (astronomy graduate of the year, Belgrade U.)

Funded Research Grants

Orbital Evolution of Outer Solar System Satellites.
NASA Outer Planets Research Program
Sep 2011 – Sep 2014. Role: PI

Orbital Dynamics of Small Bodies in the Inner Solar System.
NASA Planetary Geology and Geophysics Program
Selected May 2012, 3-year duration. Role: PI

Advising Experience

Senior thesis co-adviser for **Firth M. McEachern**, Harvard class of '09 (together with Professor Sarah T. Stewart). Mr. McEachern's thesis was awarded Hoopes Prize, and became a basis for a refereed paper in *Icarus*.

Community Service

2012 Elected Vice-Chair of the Division of the Dynamical Astronomy of the AAS for the July 2012 – June 2013 term
2009-2010 Local Organizing Committee Co-Chair, 2010 Meeting of the AAS Division on Dynamical Astronomy in Boston, Massachusetts
2007-2009 Committee Member, Division on Dynamical Astronomy of the American Astronomical Society

Past Peer Review Duties

Reviewer for *Icarus*, *The Astronomical Journal*, *The Astrophysical Journal*, *Science*, *Nature*, *Nature Geophysics*, *Monthly Notices of the Royal Astronomical Society*, *Journal of Geophysical Research – Planets, Meteoritics and Planetary Science*, *Astronomy and Astrophysics*, *Earth and Planetary Science Letters* and other. Panelist for NASA's Outer Planets Research and Planetary Geology and Geophysics programs.

Recent and Upcoming Invited Talks

2012 DDA Meeting (Mount Hood, OR), May 10, 2012. Title: Orbital Evolution of Multiple-Moon Systems

Northwestern University (Evanston, IL), November 8, 2011. Title: Resonances and the Angular Momentum of the Earth-Moon System

PUBLICATION LIST

Refereed Research Papers

Chronology and sources of lunar impact bombardment.

M. Čuk. *Icarus* **218**, 69-79 (2012).

Rebuttal to the Comment by Malhotra and Strom on "Constraints on the source of lunar cataclysm impactors."

M. Čuk, B. J. Gladman and S. T. Stewart. *Icarus* **216** 363–365 (2011).

Lunar shape does not record a past eccentric orbit.

M. Čuk. *Icarus* **211**, 97–100 (2011).

Dynamical evolution of the Hungaria asteroids.

F. M. McEachern, M. Čuk, and S. T. Stewart. *Icarus* **210**, 644–645 (2010).

Orbital evolution of small binary asteroids.

M. Čuk and D. Nesvorný. *Icarus* **207**, 732–743 (2010).

Constraints on the source of lunar cataclysm impactors.

M. Čuk, B. J. Gladman and S. T. Stewart. *Icarus* **207**, 590–594 (2010).

Current bombardment of the Earth-Moon system.

J. Gallant, B. J. Gladman and M. Čuk. *Icarus* **202**, 371–382 (2009).

The fate of primordial lunar Trojans.

M. Čuk and B. J. Gladman. *Icarus* **199**, 237–244 (2009).

Excitation of lunar eccentricity by planetary resonances.

M. Čuk. *Science* **318**, 244 (2007).

Formation and destruction of small binary asteroids.

M. Čuk. *The Astrophysical Journal* **659**, L57–L60 (2007).

Irregular satellite capture during planetary resonance passage.

M. Čuk and B. J. Gladman. *Icarus* **183**, 362–372 (2006).

Effects of thermal radiation on the dynamics of binary NEAs.

M. Čuk and J. A. Burns. *Icarus* **176**, 418–431 (2005).

Constraints on the orbital evolution of Triton.

M. Čuk and B. J. Gladman. *The Astrophysical Journal* **626**, L113–L116 (2005).

Resonances near the orbit of 2003 VB₁₂ (Sedna).

M. Čuk. *Proceedings of IAU Colloquium 197* (Z. Knežević and A. Milani, Eds.), Cambridge University Press, pp.341–348 (2005).

On the secular behavior of irregular satellites.

M. Čuk and J. A. Burns. *The Astronomical Journal* **128**, 2518–2541 (2004).

Chaos and the effects of planetary migration on the orbit of S/2000 S5 Kiviuq.

V. Carruba, D. Nesvorný, J. A. Burns, M. Čuk and K. Tsiganis. *The Astronomical Journal* **128**, 1899–1916 (2004).

Gas-drag-assisted capture of Himalia’s family.

M. Čuk and J. A. Burns. *Icarus* **167**, 369–381 (2004).

Future Papers

An erosive impact onto a fast-spinning Earth produces a Moon derived from Earth’s mantle.

M. Čuk and S. T. Stewart. To be submitted to *Science*.

On the long-term stability of horseshoe coorbitals.

M. Čuk, D. P. Hamilton and M. J. Holman. To be submitted to *MNRAS*.

Orbital evolution of Haumea’s satellites.

M. Čuk, D. Ragozzine and D. Nesvorný. In preparation for *Astronomical J.*

Invited Papers

Kick for the cosmic clockwork.

M. Čuk, *Nature Geoscience* **5**, 7–8 (2012).

Irregular satellites of the giant planets.

P. D. Nicholson, M. Čuk, S. S. Sheppard, D. Nesvorný, and T. V. Johnson. *The Solar System Beyond Neptune* (Barucci, Boehnhardt, Cruikshank and Morbidelli, Eds.), Univ. of Arizona Press, Tucson (2008).