

CURRICULUM VITAE

Name: **Tomáš Kohout**
Date of birth: January 4, 1980 in Prague, Czech Republic
Nationality: Czech

Education and career

Education

2009 Ph.D. in geophysics / applied geology – University of Helsinki / Charles University in Prague
(joint Ph.D. program)
2007 RNDr. in applied geology - Charles University in Prague
2003 Mgr. (M.Sc.) in applied geophysics - Charles University in Prague

Ongoing positions

Since 2007 assistant at Department of Physics, University of Helsinki, Finland – specialization
meteorite petrophysics, planetology, rock physics (full time appointment)
Since 2004 researcher at Institute of Geology, Academy of Sciences of the Czech Republic, Prague –
specialization rock magnetism, magnetic mineralogy, meteorite petrophysics (part time
appointment)

Past positions and trainings

2009 Scientist on R/V Aranda, sea ice research in Bay of Botnia, Baltic Sea (12 days)
2008 Lunar exploration graduate student summer intern at Lunar and Planetary Institute, Houston,
USA (10 weeks)
2008 Winter ecology course at Kilpisjärvi biological station (69°03'N), Finland (10 days)
2004-2006 researcher at University of Helsinki, Finland – specialization meteorite petrophysics (full
time contract)
2004-2009 graduate student at University of Helsinki, Finland – specialization geophysics, meteorite
petrophysics
2003-2009 graduate student at Charles University in Prague, Czech Republic – specialization applied
geology, meteorite petrophysics
2000-2002 technical specialist at Institute of Geology, Academy of Sciences of the Czech Republic,
(part time job)
1998-2003 undergraduate/graduate student at Charles University in Prague, Czech Republic –
specialization geology, applied geophysics
1997-2003 public guide at Stefanik Observatory, Prague

Teaching

Since 2010 supervision of students at Department of Physics, University of Helsinki

Since 2004 annually Solid Earth geophysics laboratory course at Department of Physics, University of Helsinki

Since 2004 annually supervision of summer students at Department of Physics, University of Helsinki

Organization of international meetings

2010 – co-convener of the session “Meteor observations, determination of their properties and link to meteorites” (SB4) at European Planetary Science Congress 2010, Rome, Italy, September 19-24, 2010.

2007 – convener of the session “Magnetism of extraterrestrial materials and bodies” (ASI008) at XXIV International Union of Geodesy and Geophysics / International Association of Geomagnetism and Aeronomy General Assembly, Perugia, Italy, July 2-13, 2007.

2006 – convener of the session “Extraterrestrial Magnetism” (GP24A) at 2006 AGU Joint Assembly, Baltimore, Maryland, USA, May 23-26, 2006.

Membership

Since 2010 Division for Planetary Sciences of the American Astronomical Society

Since 2009 member of Task Group for Physical Properties of Near-Earth Objects (IAU)

Since 2004 The Meteoritical Society

Since 2001 American Geophysical Union

Since 1998 Czech astronomical society (1998-2003 treasurer of the Prague branch)

Hobbies and sports

Astronomy, aviation (PPL student), aeronautics, space research, aikido, canoeing, mountain hiking, bicycling, skiing, swimming, computers (advanced PC hardware and software knowledge including MS Windows, basic Linux and Mac knowledge) literature of fact (documents and memories).

PUBLICATION LIST

Papers in scientific journals

- Kohout T.**, Kletetschka G., Pesonen L. J. (2011): From Laboratory Scale to Astronomical Scale – Implications on Physical Properties of Hayabusa Sample Return from (25143) Itokawa Asteroid, ASP Conference Series, accepted, in press.
- Kohout T.**, Pesonen L., Deutsch A., Wünneman K., Nowka D., Hornemann U., Heikinheimo E. (2012): Shock experiments in range of 10–45 GPa with small multidomain magnetite in porous targets. *Meteoritics & Planetary Science*, 47, 1671–1680. DOI: 10.1111/maps.12003
- Cuda J., **Kohout T.**, Tucek J., Filip J., Medrik I., Mashlan M., Zboril R. (2012): Mössbauer study and magnetic measurement of troilite extract from Natan iron meteorite. *AIP Conference Proceedings*, 1489, 145-153. DOI: 10.1063/1.4759483
- Cuda J., **Kohout T.**, Tucek J., Haloda J., Filip J., Pucek R., Zboril R. (2011): Low-temperature magnetic transition in troilite – a simple marker for highly stoichiometric FeS systems. *Journal of Geophysical Research - Solid Earth*, 116, B11205. DOI: 10.1029/2011JB008232
- Paton M., Muinonen K., Pesonen L. J., Kuosmanen V., **Kohout T.**, Laitinen J., Lehtinen M. (2011): A PCA study to determine how features in meteorite reflectance spectra vary with the samples' physical properties. *Journal of Quantitative Spectroscopy and Radiative Transfer*, 112, 1803-1814. DOI: 10.1016/j.jqsrt.2011.01.033
- Kohout T.**, Kiuru R., Montonen M., Scheirich P., Britt B., Macke R. and Consolmagno G. (2011): 2008 TC₃ asteroid internal structure and physical properties inferred from study of the Almahata Sitta meteorites, *Icarus*, 212, 697-700. DOI: 10.1016/j.icarus.2011.01.037
- Kohout T.**, Jenniskens P., Shaddad M. H., Haloda J. (2010): Inhomogeneity of asteroid 2008 TC₃ (Almahata Sitta meteorites) revealed through magnetic susceptibility measurements. *Meteoritics & Planetary Science*, 45, 10-11, 1778-1788. DOI: 10.1111/j.1945-5100.2010.01110.x
- Kohout T.**, Kosterov A., Haloda J., Týcová P., Zbořil R. (2010): Low temperature magnetic properties of iron bearing sulfides and their contribution to magnetism of cometary bodies. *Icarus*, 208, 955-962. DOI: 10.1016/j.icarus.2010.03.021.
- Schnábl P., Novák J. K., Cajz V., Lang M., Balogh K., Pécskay Z., Chadima M., Šlechta S., **Kohout T.**, Pruner P., Ulrych J. (2010): Magnetic properties of high-Ti basaltic rocks from the Krušné

hory/Erzgebirge MTS. (Bohemia/Saxony), and their relation to mineral chemistry. *Studia Geophysica et Geodaetica*, 54, 77-94. DOI: 10.1007/s11200-010-0004-z

Kohout T., Donadini F., Pesonen L. J. (2010): Rock magnetic studies of the Neuschwanstein EL6 chondrite, implications on the origin of its remanent magnetization. *Geophysica*, 45, 3-19.

Rochette P., Gattacceca J., Bourot-Denise M., Consolmagno G., Folco L., **Kohout T.**, Pesonen L., Sagnotti L. (2009): Magnetic Classification of Stony Meteorites: 3. Achondrites. *Meteoritics & Planetary Science*, 44, 405-427.

Kohout T., Kletetschka G., Elbra T., Adachi T., Mikula V., Pesonen L. J., Schnabl P., Slechta S. (2008): Physical properties of meteorites – applications in space missions to asteroids. *Meteoritics & Planetary Science*, 43, 1009-1020.

Kohout T., Kletetschka G., Donadini F., Fuller M., Herrero-Bervera E. (2008): Analysis of the natural remanent magnetization of rocks by measuring the efficiency ratio through alternating field demagnetization spectra. *Studia Geophysica et Geodaetica*, 52, 225-235. DOI: 10.1111/j.1945-5100.2008.tb00689.x

Rochette P., Gattacceca J., Bonal L., Bourot-Denise M., Chevrier V., Clerc J.P., Consolmagno G., Folco L., Gounelle M., **Kohout T.**, Pesonen L., Quirico E., Sagnotti L. and Skripnik A. (2008): Magnetic Classification of Stony Meteorites: 2. Non-Ordinary Chondrites. *Meteoritics & Planetary Science*, 43, 959-980.

Pirkkalainen K., Leppänen K., Vainio U., Webb M. A., Elbra T., **Kohout T.**, Nykänen A., Kotelnikova N. E., and Serimaa R. (2008): Nanocomposites of magnetic cobalt nanoparticles and cellulose. *The European Physical Journal D*, 49, 333-342.

Kohout T., Kostrov A., Jackson M., Pesonen L. J., Kletetschka G., Lehtinen M. (2007): Low-temperature magnetic properties of the Neuschwanstein EL6 meteorite, *Earth and Planetary Science Letters*, 261, 143-151; DOI: 10.1016/j.epsl.2007.06.022

Pirkkalainen K., Vainio U., Kisko K., Elbra T., **Kohout T.**, Kotelnikova N. E., and Serimaa R. (2007): Structure of nickel nanoparticles in a microcrystalline cellulose matrix studied using anomalous small-angle x-ray scattering. *Journal of Applied Crystallography* 40, 489-494.

Eskelinen J., Hoffrén H., **Kohout T.**, Hægström E. and Pesonen, L. J. (2007): Ultrasonic porosity estimation of low-porosity ceramic samples. *AIP Conference Proceedings*, 894, 1320-1327.

Kletetschka G., Fuller M.D., **Kohout T.**, Wasilewski P.J., Herrero-Bervera E., Ness N.F. and Acuna M.H. (2006): TRM in low magnetic fields: a minimum field that can be recorded by large multidomain grains. *Physics of the Earth and Planetary Interiors*, 154, 290-298.

- Kohout T.**, Kletetschka G., Kobr M., Pruner P., Wasilewski P. J. (2004): The Influence of Terrestrial Processes on Meteorite Magnetic Records. *Physics and Chemistry of the Earth*, 29 (13–14), 885-897.
- Kletetschka G., Acuna M. H., **Kohout T.**, Wasilewski P. J., Connerney J. E. P. (2004): An Empirical Scaling Law for Acquisition of Thermoremanent Magnetization. *Earth and Planetary Science Letters*, 226 (3-4), 521-528.
- Hladil J., Carew J. L., Mylroie J. E., Pruner P., **Kohout T.**, Jell J. S., Lacka B., Langrova A. (2004): Anomalous magnetic susceptibility values and traces of subsurface microbial activity in carbonate banks on San Salvador Island, Bahamas. *Facies*, 50 (2), 161-182.
- Kletetschka G., **Kohout T.**, Wasilewski P. J. (2003): Magnetic Remanence in Murchison Meteorite. *Meteoritics & Planetary Science* 38 (3), 399-406.

Chapters in scientific books and monographs

- Kohout T.**, Losiak A., O’Sullivan K., Thaisen K., Weider S. (2012): Science concept 1: The bombardment history of the inner solar system is uniquely revealed on the Moon. In *A Global Lunar Landing Site Study to Provide the Scientific Context for Exploration of the Moon*; in. Kring D. A. and Durda D. D. (eds.), LPI Contribution No. 1694, Lunar and Planetary Institute, Houston, TX, pp. 1-45.
- O’Sullivan K. M., **Kohout T.**, Thaisen K. G., Kring D. A. (2011): Calibrating several key lunar stratigraphic units representing 4 billion years of lunar history within Schrödinger Basin; in Ambrose W.A. and Williams D.A. (eds.), *Recent Advances and Current Research Issues in Lunar Stratigraphy*. Geological Society of America Special Paper 477, p. 117-127. DOI: 10.1130/2011.2477(05).

Thesis

- Kohout T.** (2009): *Physical Properties of Meteorites and Their Role in Planetology*, Ph.D. Thesis (Report Series in Geophysics No. 60), Department of Physics, Faculty of Science, University of Helsinki, Helsinki, Finland.
- Kohout T.** (2003): *The Influence of Terrestrial Processes on Meteorite Magnetic Records*, M.Sc. Thesis, Department of Applied Geophysics, Faculty of Science, Charles University in Prague, Prague, Czech Republic.