

Curriculum Vitae

Name: Prof. Ferenc SIMON (PhD, habil., DsC)

Born, Age: Budapest, 8th June, 1974

Nationality, civil status: Hungarian, Married, 3 Children

Studies: Budapest University of Technology and Economics (BUTE),
physicist-engineer 1992-1997
The University of Manchester 1995-1996, 1997 June MSc as physicist-engineer
with distinction, BUTE, 2002 February PhD in physics, BUTE

Postdoctoral positions:

2003 january- 2003 october, Postdoc at University of Vienna (UVIE), Austria
2003 nov.- 2005 oct., Postdoc with Marie Curie Individual Grant (EIF), UVIE
2009 sept-2010 aug. postdoc at the UVIE, Austria

Additional titles: *Habilitation*, 2007 at the University of Vienna, 2nd *Habilitation*: 2010 BUTE
Doctor of Sciences of the Hungarian Academy of Sciences, 2009

Present position: professor at the BUTE, Institute of Physics (since 2011)

Venia docendi (External associate professor) at the University of Vienna.

Teaching: since 1997. Lectures at BUTE and Univ. of Vienna (in German).

Languages: Fluent, university lecturer level of 3 languages: Hungarian (mother tongue),
English (Cambridge Proficiency Exam), German (lectures in German at the
UVIE). Conversational/fluent in French, elementary in Spanish.

Affiliation: Professor at the Dept. of Phys., Faculty of Natural Sciences, BUTE, Hungary.
Deputy director of the Institute of Physics, BUTE

Responsibilities: 26 completed BSc/MSc. Presently: 4 BSc/MSc students, 4 PhD students.

Professional Service:

Professor selection committee (external reviewer) for the University of Vienna. Reviewer for 20
PhD degrees in Hungary. Referee for Phys. Rev. Lett., Phys. Rev. B, Chem. Phys. Lett., Carbon,
Eur. Phys. J. B, Phys. Stat. Sol., J. Nanosci. Nanotechn., J. Magn. Res., Nature Comm. Several
media appearances in Hungarian television broadcast, radio programmes and two articles for the
popularization of science. Referee for the Romanian Research Council and for the European
Research Agency. Member of the Physics Doctoral School and the Faculty Board of the Faculty
of Nat. Sciences of the BUTE. Co-organizer of 3 conferences, scientific board of the IWEPNM.
Nature Scientific Reports, *Editorial Board member*.

Publications: *139 papers, 1600 indep. citations, 24 h-index*, including 60 as 1st or senior
author (9 PRL, 11 PRB), 6 Book Chapters. 30 conference talks, 9 invited.

Awards, Grants: Talentum Prize of the Hungarian Academy of Sciences, 2006
Starting Grant of the European Research Council, 2010
Momentum program of the Hungarian Academy of Sciences, 2015

Research highlights related to magnetic resonance

I. Magnetic resonance instrument development

M Nagyed , J Palotás , B Gyüre , S Dzsaber , S Kollarics , P Rohringer , T Pichler , F Simon

An optically detected magnetic resonance spectrometer with tunable laser excitation and wavelength resolved infrared detection
REVIEW OF SCIENTIFIC INSTRUMENTS 88:(1) Paper 013902. (2017)

Gyüre B , Márkus, B. G. , Bernáth, B. , Murányi, F. , Simon, F.

A time domain based method for the accurate measurement of Q-factor and resonance frequency of microwave resonators
REVIEW OF SCIENTIFIC INSTRUMENTS 86:(9) Paper 094702. 5 p. (2015)

Simon F., Muranyi F

ESR spectrometer with a loop-gap resonator for cw and time resolved studies in a superconducting magnet
JOURNAL OF MAGNETIC RESONANCE 173:(2) pp. 288-295. (2005)

Muranyi F , Simon F., Fulop F , Janossy A

A longitudinally detected high-field ESR spectrometer for the measurement of spin-lattice relaxation times
JOURNAL OF MAGNETIC RESONANCE 167: pp. 221-227. (2004)

II. Experiments on spin-relaxation in metals and semiconductors

Simon F., Jánossy A , Fehér T , Murányi F , Garaj S , Forró L , Petrovic C , Budko SI , Canfield PC

Anisotropy of superconducting MgB₂ as seen in electron spin resonance and magnetization data
PHYSICAL REVIEW LETTERS 87:(4) Paper 047002. 4 p. (2001)

Simon F., Janossy A , Feher T , Muranyi F , Garaj S , Forro L , Petrovic C , Bud'ko S , Ribeiro RA , Canfield PC

Magnetic-field-induced density of states in MgB₂: Spin susceptibility measured by conduction-electron spin resonance
PHYSICAL REVIEW B 72:(1) pp. 012511-012514. (2005)

Simon F., Murányi F , Fehér T , Jánossy A , Forró L , Petrovic C , Budko SL , Canfield PC

Spin-lattice relaxation time of conduction electrons in MgB₂

PHYSICAL REVIEW B 76: Paper 024519. (2007)

Simon F., Dora B , Muranyi F , Janossy A , Garaj S , Forro L , Bud'ko S , Petrovic C , Canfield PC

Generalized Elliott-Yafet theory of electron spin relaxation in metals: Origin of the anomalous electron spin life-time in MgB₂
PHYSICAL REVIEW LETTERS 101:(17) Paper 177003. 4 p. (2008)

Dora B , Simon F

Electron-spin dynamics in strongly correlated metals

PHYSICAL REVIEW LETTERS 102:(13) Paper 137001. 4 p. (2009)

Fabian G , Dora B , Antal A , Szolnoki L , Korecz L , Rockenbauer A , Nemes NM , Forro L , Simon F

Testing the Elliott-Yafet spin-relaxation mechanism in KC₈: A model system of biased graphene

PHYSICAL REVIEW B 85:(23) Paper 235405. 6 p. (2012)

Szirmai P , Fabian G , Koltai J , Nafradi B , Forro L , Pichler T , Williams OA , Mandal S , Bauerle C , Simon F

Observation of conduction electron spin resonance in boron-doped diamond

PHYSICAL REVIEW B 87:(19) Paper 195132. 5 p. (2013)

III. Magnetic resonance in carbon nanostructures

Simon F., Kuzmany H , Bernardi J , Rauf H , Pichler T , Korecz L , Fülöp F , Jánossy A

Low temperature fullerene encapsulation in single wall carbon nanotubes: synthesis of N@C₆₀@SWCNT
CHEMICAL PHYSICS LETTERS 383: pp. 362-367. (2004)

Simon F., Kramberger C , Pfeiffer R , Kuzmany H , Zolyomi V , Kurti J , Singer PM , Alloul H

Isotope engineering of carbon nanotube systems

PHYSICAL REVIEW LETTERS 95:(1) Paper 017401. 4 p. (2005)

Simon F, Fülöp F, Rockenbauer A, Korecz L, Kuzmany H

Highly C-13 isotope enriched azafullerene, C₅₉N, for nuclear spin labelling

CHEMICAL PHYSICS LETTERS 404:(1-3) pp. 85-89. (2005)

Simon F, Kuzmany H, Náfrádi B, Fehér T, Forró L, Fülöp F, Jánossy A, Korecz L, Rockenbauer A, Hauke F, Hirsch A

Magnetic fullerenes inside single-wall carbon nanotubes

PHYSICAL REVIEW LETTERS 97:(13) pp. 136801-4. (2006)

Tóth S, Quintavalle D, Náfrádi B, Korecz L, Forró L, Simon F

Enhanced thermal stability and spin-lattice relaxation rate of N@C-60 inside carbon nanotubes

PHYSICAL REVIEW B 77:(10) Paper 214409(6). (2008)

Kiss A, Palyi A, Ihara Y, Wzietek P, Simon P, Alloul H, Zolyomi V, Koltai J, Kurti J, Dora B, Simon F

Enhanced NMR Relaxation of Tomonaga-Luttinger Liquids and the Magnitude of the Carbon Hyperfine Coupling in Single-Wall Carbon Nanotubes

PHYSICAL REVIEW LETTERS 107:(18) 5 p. Paper 187204. 5 p. (2011)