



TECHNISCHE
UNIVERSITÄT
WIEN
Vienna University of Technology



Low Temperature Physics Seminar

Winter Term 2015 (preliminary)

This seminar takes place on Mondays, 16:15 in the library of the Atominstitut, Stadionallee 2.

- November 16, 2015 David X. Fischer
Neutron irradiation studies on superconducting properties of coated conductor tapes for fusion magnets
- November 23, 2015 Erika Jensen-Jarolim^a and Rodolfo Bianchini^b
Lipocalins manipulate the immune system in the context with iron
- December 14, 2015 Vyacheslav Marchenkov^c
Electrical and magnetic properties of Heusler alloys
- January 11, 2016 Sigrid Holleis
Enhancing high field performance of cuprate and iron based superconductors
- January 18, 2016 Neven Barisic^d
Charge transport in the cuprate superconductors
- January 25, 2016 David Keays^e
The search for the magnetoreceptor

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^bDept. of Comparative Medicine, Messerli Research Institute, University of Veterinary Medicine Vienna, Medical University Vienna and University Vienna

^cInstitute of Metal Physics, Russian Academy of Sciences, Ekaterinburg

^dInstitute of Solid State Physics, TU Wien, Vienna

^eInstitute for Molecular Pathology, Vienna



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Winter Term 2014

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|-------------------|---|
| November 10, 2014 | Wolfgang Lang (Universität Wien)
Vortices in cuprate superconductors with periodic modulations of the order parameter |
| November 17, 2014 | David Fischer
Radiation resistance of technological superconductors in view of fusion applications |
| November 24, 2014 | Michael Eisterer, David Fischer, Mayraluna Lao
Presentations for CCA 2014 |
| December 15, 2014 | René Fuger (GUINA Research & Development)
Superconducting Homopolar Motor Developments |
| January 12, 2015 | Ventsislav Mishev
Studying flux pinning phenomena in BaFe_2As_2-based superconductors |
| January 19, 2015 | Alexander Meledin (University of Antwerp)
Advanced TEM characterization of coated conductors |
| January 26, 2015 | John Durrell (University of Cambridge)
A 17.6 T Trapped Magnetic Field in Ag-GdBaCuO |



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Low Temperature Physics Seminar

Winter Term 2013

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|-------------------|---|
| October 14, 2013 | Rainer Prokopec
Recent progress in coated conductor development |
| October 28, 2013 | Antonio Briones León
Tuning the magnetic properties of low-dimensional metallic clusters encapsulated in single walled carbon nanotubes |
| November 18, 2013 | Benedikt Würkner
The Vibrating Coil Magnetometer |
| November 25, 2013 | Ventsislav Mishev
Synthesis of superconducting iron based 122 chalcogenides |
| December 2, 2013 | Martin Zehetmayer
Tunneling spectroscopy of the flux-line lattice of a superconductor: on disorder, defect clusters, and the order-disorder transition of the lattice |
| December 9, 2013 | Franz Sauerzopf
Metallurgy of the superconducting vortex lattice |
| December 16, 2013 | Florian Köchl
Fuelling and particle transport in ITER |
| January 27, 2014 | David Fischer CANCELLED !
Critical current anisotropy in iron-based superconductors |



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Low Temperature Physics Seminar

Winter Term 2012

This seminar takes place on Mondays, 16:15 in the library of the Atominstitut, Stadionallee 2.

- 19 November 2012 Tatiana Prikhna (National Academy of Sciences of Ukraine)
**Pinning in nanostructural superconducting materials
(MgB₂ - and YBCO-based)**
- 26 November 2012 Michael Eisterer
**Flux Pinning in Ba-122 Single Crystals: Influence of Doping
and Neutron Irradiation**
- 3 December 2012 Thomas Baumgartner
**SQUID Magnetometry on Multifilamentary Superconductors
– Procedures, Profits, Pitfalls**
- 10 December 2012 Sebastian Singer
Dislocation Interaction in the Vortex Lattice
- 17 December 2012 Clemens Simson (IFP TU Wien)
**Magnetic Ordering and Transitions in RT9X4-alloys:
overview and methods**
- 7 January 2013 Johannes Hecher
Inter- and intragranular currents in iron-based superconductors
- 14 January 2013 Martin Zehetmayer
Two-band superconductivity
- 21 January 2013 Mayraluna Lao
Magnetic properties of novel superconductor tapes



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Datum / Date

Winter Term 2011/2012

LOW TEMPERATURE PHYSICS SEMINAR

(TU 141.058, Univ. 854 755)

Monday, 16:15
Library, Atominstitut

10.10.2011	H.W. Weber	Introduction
17.10.2011	R. Prokopec / J. Emhofer	Presentations, 26 th Association Day in Leoben: Insulators for the ITER magnets / HTS for fusion applications
07.11.2011	T. Prikhna (Kiev)	Pressure-temperature effect on manufacturing process, structure and pinning in MgB ₂ -based superconductors
21.11.2011	J. Emhofer	Analysis of coupled coated conductors for fusion magnet applications
05.12.2011	W. Goldacker (KIT)	HTS- and MgB ₂ -cable developments at KIT
09.01.2012	W. Seeböck	Inter-granular currents in bi- and polycrystalline superconducting iron-based thin films
16.01.2012	T. Baumgartner	Neutron irradiation induced changes of the superconducting parameters in multifilamentary Nb ₃ Sn wires
23.01.2012	D. Seppi	Properties of edge dislocations in the vortex lattice



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Winter Term 2010/2011

LOW TEMPERATURE PHYSICS SEMINAR

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Monday, 16:15
Library, Atominstitut

04.10.2010	H.W. Weber	Introduction
18.10.2010	M. Eisterer	Invited talks at CCA and ISS 2010
08.11.2010	E. Pardo (Bratislava)	Ac magnetization scans on coated conductors and Roebel cables
22.11.2010	M. Chudy	High temperature superconductors for fusion magnets
29.11.2010	T. Baumgartner	Evaluation of the critical current densities of neutron irradiated Nb ₃ Sn wires based on magnetization measurements
06.12.2010	J.H. Shi (Cambridge)	Top Seeded Melt Growth (TSMG) of single grain REBCO superconductors – progress of fabricating bulk materials from "using no seeds" to "using thin films as seeds"
13.12.2010	F. Hengstberger	Assessment of the critical current anisotropy in coated conductors by magnetic measurements
10.01.2011	R. Raunicher	Transport and magnetic measurements on 122 pnictide thin films
17.01.2011	G. Csaszar	The Italian power grid and the leverage of hydro-power
24.01.2011	V. Mishev	Critical current anisotropy of coated conductors under tensile stress



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Winter Term 2009/2010

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Monday, 16:15
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12.10.2009	H.W. Weber	Introduction
09.11.2009	R. Prokopec	Manufacturing and testing of magnet insulation materials
16.11.2009	M. Weigand (Cambridge)	Influence of grain boundaries and vicinality on coated conductor performance
30.11.2009	A. Wisniewski (Warszawa)	Magnetic properties of manganite and cobaltite nano-particles
07.12.2009	N. Hörhager	High temperature superconducting bulks with high trapped fields aimed at industrial fabrication
11.01.2010	F.M. Sauerzopf	Summation of pinning forces
18.01.2010	E. Pardo	AC magnetization process in coated conductors and Roebel cables
25.01.2010	M. Chudy	Critical currents in coated conductors



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Winter Term 2008/2009

LOW TEMPERATURE PHYSICS SEMINAR

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Monday, 16:15
Library, Atominstitut

06.10.2008	M. Eisterer	Introduction
20.10.2008	J. Emhofer	Current percolation in MgB ₂ superconductors
03.11.2008	R. Prokopec / H. Fillunger	Superconductors and insulators for ITER
10.11.2008	R. Fuger	Report on the 2 nd Summer School on Fusion Technologies at FZK
17.11.2008	R. Dinner (Cambridge)	Scanning Hall probe microscopy of super-currents in YBCO
24.11.2008	M. Eisterer	Superconductivity in the iron pnictides
15.12.2008	V. Mishev	Characterization methods for the local currents in coated conductors
12.01.2009	C. Sborchia (F4E Barcelona)	EU procurement strategies for the ITER magnets
19.01.2009	N. Hörhager	Nano-particle doped bulk superconductors



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Winter Term 2007/2008

LOW TEMPERATURE PHYSICS SEMINAR

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Monday, 16:15
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08.10.2007	F.M. Sauerzopf	Introduction
29.10.2007	R. Prokopec	Mechanical properties of novel cyanate ester based magnet insulation systems after reactor irradiation to high neutron fluences
12.11.2007	T. Withnell	Characterisation of bulk RE-Ba-Cu-O superconductors by use of an in-situ Hall scanning probe
19.11.2007	E. Pardo (Bratislava)	Predicting the electromagnetic response of practical superconductors
03.12.2007	A. Vostner (EFDA Garching)	ITER TF conductor R&D and qualification
07.01.2008	A. Bienias	Influence of low Pr substitution on the superconducting parameters of Y-123
14.01.2008	K.R. Schöppel	Critical current anisotropy in HTS thin films
28.01.2008	M. Chudy	Physical characterization of coated conductors