

NZ - Japan HTS Magnet Technology Workshop Programme

3 - 8 December, 2014



Wednesday - 3 December

Victoria University, Wellington
Peppers Parehua, Martinborough

9:00 **Welcome ceremony & morning tea** – The Hub, Kelburn campus, Victoria University

10:10 Travel to Martinborough

12:00 Lunch

1:00 **Welcome speech**

Bob Buckley, *Robinson Research Institute, Victoria University of Wellington*

1:10 **Opening Remarks**

Naoyuki Amemiya, *Kyoto University*

Key note presentations

Chairperson: Naoyuki Amemiya

1:20 Kenichi Sato *Cryogenics and Superconductivity Society of Japan*
'Overview of Superconductivity Projects in Japan'

2:05 Bob Buckley *Robinson Research Institute, Victoria University of Wellington*
'Introduction to NZ superconductivity development programmes'

2:50 Afternoon tea

Session 1 - HTS magnets I

Chairperson: Rob Slade

3:20 Hitoshi Kitaguchi *NIMS (National Institute for Materials Science)*
'Bi-HTS cryocooled 3T MRI magnet: fabrication, operation, and analysis of an abnormal event'

3:50 Donald Pooke *HTS-110*
'An overview of HTS products developed by HTS-110'

- 4:20 Yusuke Sogabe *Kyoto University*
'Some considerations on models for numerical electromagnetic field analyses of three-dimensional-shape HTS coils'
- 4:40 Naoyuki Amemiya *Kyoto University*
'Fundamental technology R&D of HTS accelerator magnets for medical applications'

Thursday - 4 December

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Session 2 – Materials & wire

Chairperson: Satoshi Awaji

- 9:00 **Plenary presentation**
Jeff Tallon *Robinson Research Institute, Victoria University of Wellington*
'New superconductor materials - from drawing board to reality'
- 9:50 Kenichi Sato *Sumitomo Electric Industries, Ltd*
'Recent progress of DI-BSCCO wires and their applications at Sumitomo Electric'

10:20 Morning tea

- 10:50 Masanori Daibo *Fujikura Ltd*
'Recent activities of REBCO coated conductors at Fujikura'
- 11:20 Nick Strickland *Robinson Research Institute, Victoria University of Wellington*
'HTS Wire Characterisation and Optimisation for Magnet Applications - Part 1'
- 11:40 Stuart Wimbush *Robinson Research Institute, Victoria University of Wellington*
'HTS Wire Characterisation and Optimisation for Magnet Applications - Part 2'

12:00 Lunch

Session 3 – HTS magnets II

Chairperson: Rod Badcock

- 1:00 Satoshi Awaji *Tohoku University*
'R&D of HTS insert coil and development of high field cryogen-free superconducting magnets'
- 1:30 Mike Fee *HTS-110*
'HTS beamline and metrology magnets'
- 2:00 Toru Ogitsu *KEK (High Energy Accelerator Research Organization)*
'Progress and prospect of HTS applications on high energy accelerators'

Session 4 – Applications I

Chairperson: Toru Ogitsu

- 2:30 Rod Badcock *Robinson Research Institute, Victoria University of Wellington*
'Flux pumping HTS magnets and application to machines – Part 1'
- 3:00 Afternoon tea**
- 3:30 Chris Bumby *Robinson Research Institute, Victoria University of Wellington*
'Flux pumping HTS magnets and application to machines – Part 2'
- 4:00 Nick Long *Robinson Research Institute, Victoria University of Wellington*
'Mechanical and electrical performance of HTS Roebel cables and the implications for HTS magnet applications'
- 4:30 Zhenan Jiang *Robinson Research Institute, Victoria University of Wellington*
'Total AC loss measurements in a six strand Roebel cable carrying an AC current in an AC magnetic field'

Friday - 5 December

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Session 5 – Magnets III

Chairperson: Nick Long

- 9:00 Yoshinori Yanagisawa *RIKEN (The Institute of Physical and Chemical Research)*
'Perspectives for developments of super-high field NMR magnets using HTS coils'
- 9:30 Ben Parkinson *Robinson Research Institute, Victoria University of Wellington*
'1.5 T 2G HTS MRI magnet system integration and future development programme – Part 1'
- 10:00 Morning tea**
- 10:30 Rob Slade *Robinson Research Institute, Victoria University of Wellington*
'1.5 T 2G HTS MRI magnet system integration and future development programme – Part 2'
- 11:00 Taotao Huang *HTS-110*
'Custom magnet systems and projects at HTS-110'

11:30 Lunch

Session 6 – Applications II

Chairperson: Kenichi Sato

- 1:00 Nick Emery *Callaghan Innovation*
'Diaphragm Pressure Wave Generator developments for cost effective cryo-coolers '
- 1:30 Hugh Reynolds *Fabrum Solutions Ltd*
'Applications for composites in magnet systems'

2:00 Mike Staines *Robinson Research Institute, Victoria University of Wellington*
'NZ 1 MVA transformer: towards HTS transformers in the grid '

2:30 Brice Felder *Suzuki Shokan Co., Ltd.*
'Cryogenics for HTS applications'

2:50 Afternoon tea

3:20 **Round table discussion**
Chairperson: Bob Buckley and Naoyuki Amemiya

Saturday - 6 December

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9:00 Net-working discussion

10:00 Morning tea

Sunday –7 December

Peppers Parehua, Martinborough

9:00 Net-working discussion

12:00 Travel to Wellington

Monday - 8 December 2014

Robinson Research Institute, Gracefield, Wellington

9:30 Technical tour and wrap-up

11:30 Closing Remarks, Training cottage