

Workshop and Dissemination Meeting for EMRP Joint Research Project NEW08 MetNEMS

Metrology with and for NEMS and Superconducting Sensors

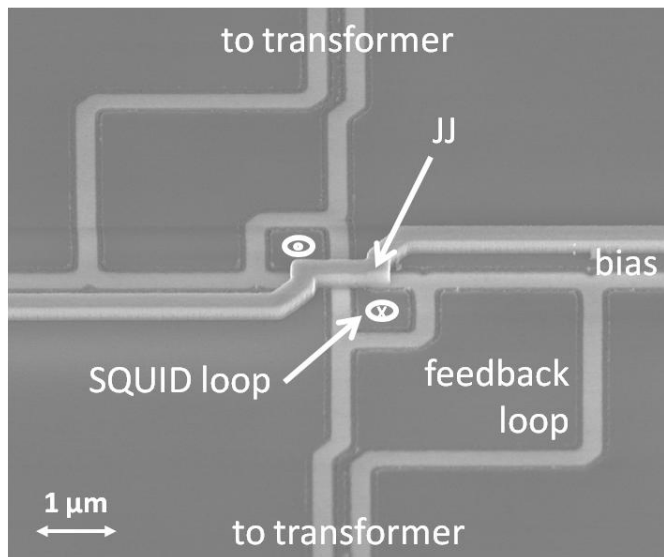
June 18, 2015, Berlin

Physikalisch-Technische Bundesanstalt

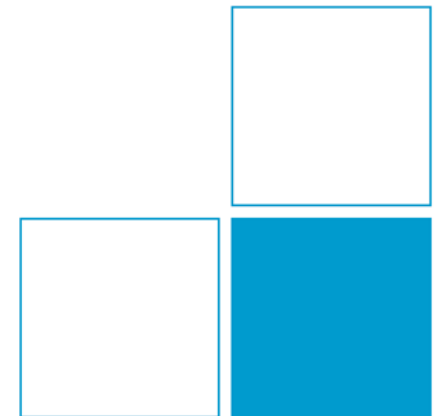
Campus Berlin

Hermann-von-Helmholtz-Building

www.ptb.de/berlin



Electron micrograph of a nanoSQUID gradiometer with HfTi-junctions (PTB Braunschweig and Berlin)



Organisation

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Invitation

Metrology with and for NEMS and Superconducting Sensors

June 18, 2015

The workshop

Micro and Nano Electromechanical Systems (MEMS/NEMS) and superconducting sensors are the subject of intense research activity in European projects. The EMRP Joint Research Project “Metrology with/for NEMS” which runs over a period of 3 years from 2012 – 2015, is focused on developing novel high frequency, high performance nanoscale mechanical resonators and actuators. Aimed at both metrology and industrial applications including ultra-sensitive mass, force, displacement and temperature sensing at the nanoscale, single photon and single molecule measurement, as well as integrated nanoscale charge sensors, this project will facilitate ultra-stable and miniaturised voltage references.

A large number of such devices are operated at low temperatures to achieve a low-noise performance like SQUIDs and TES. To date, there has been limited metrological activity to anticipate the impending metrological needs which exploitation of these cryogenic devices will produce.

This workshop is aimed at discussing application and metrological issues of NEMS and cryogenic sensors. It is also a dissemination meeting of the Joint Research Project (JRP) “Metrology with and for NEMS” in the framework of the European Metrology Research Program (EMRP).

Venue

The meeting will take place in the Helmholtz-Building of the Berlin site of PTB. The historical PTB campus which is located within walking distance from Kurfürstendamm and Bahnhof Zoologischer Garten, right in the heart of Berlin's 'City West'.

Accommodation

We recommend the following hotels which are in walking distance to the meeting site. These hotels are listed in booking portals, e. g. booking.com, hrs.com.

Wyndham Excelsior (ex Excelsior)

www.wyndhamberlinexcelsior.com

Novotel Berlin Am Tiergarten

www.novotel.com/de/hotel-3649-novotel-berlin-am-tiergarten/index.shtml

H'Otello K'80 Berlin

www.hotello.de/k80-berlin

Hotel Heidelberg Berlin

www.hotel-heidelberg-berlin.de

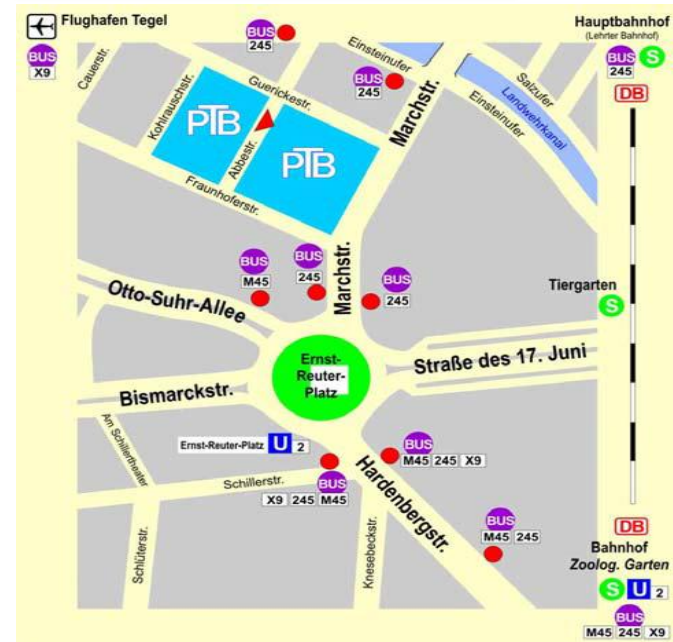
Registration

Please register for the meeting at our homepage

<http://web.ptb.de/cms/service-seiten/veranstaltungen.html>

MetNems2015@ptb.de

Access



By train: Station Berlin Hauptbahnhof is connected to the train station Berlin Zoologischer Garten by S-Bahn: S 7 (destination Potsdam Hauptbahnhof) or S 75, S 9 (destination Spandau).

By plane: From airport Berlin-Tegel to stations Ernst-Reuter-Platz or Zoologischer Garten by express bus X9. From airport Berlin-Schönefeld to station Zoologischer Garten by railway (express train RE) and S-Bahn S9.

By car: The PTB campus is located in the western part of Berlin, close to Ernst-Reuter-Platz and the Technical University.

Confirmed Speakers

Ling Hao, National Physics Laboratory, UK

Jörn Beyer, Physikalisch-Technische Bundesanstalt, Germany

Arnaud Blois, London Centre for Nanotechnology, UK

Heinz-Wilhelm Hübers, German Aerospace Center

Oliver Kieler, Physikalisch-Technische Bundesanstalt, Germany

Chiara Portesi, Istituto Nazionale di Ricerca Metrologica, Italy

Mauro Rajteri, Istituto Nazionale di Ricerca Metrologica, Italy

Roman Wölbing, University of Tuebingen, Germany

Preliminary Programme

Welcome & Reception	9:00 - 10:00
Talks	10:00 - 12:00
Lunch Break	12:00 - 13:00
Talks	13:00 - 15:00
Coffee Break	15:00 - 16:00
Talks	16:00 - 18:00
Lunch Buffet	18:00 - 20:00

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