

# International Workshop on Sensors and Materials for Cryogenic Applications: Properties, Technology and Metrology

<http://www.microsensor.com.ua/workshop>  
27-29 September 2004 Kiev, Ukraine

## Workshop programme

### Oral presentations

**Tuesday, 28 September 2004**

Institute of Semiconductor Physics, National Academy of Sciences of Ukraine, 41 Prospect Nauki, Kiev, room 237.

Chairperson Franco Pavese  
Co-Chairpersons Igor Prokopenko  
Vadim Mitin

- 10:00 F. Pavese, (Institute of Metrology, Turin, Italy)**  
"The ITS-90 and ITS-xx in the cryogenic range and interpolating instruments for primary and secondary realisations".
- 10:40 V.F. Mitin, (Institute of Semiconductor Physics and "MicroSensor", Kiev)**  
N.S. Boltovets, V.V. Basanets, V.V. Kholevchuk, I.Yu. Nemish.  
"A review of Ge/GaAs thermometers and multisensors for low-temperature and magnetic field measurements".
- 11:00 P.C. McDonald, (Institute of Cryogenic, University of Southampton, UK)**  
"Determination of the thermal conductivity of CFRP struts for use in a space observatory: – the use of Ge/GaAs resistance thermometers in a cryogenic application".
- 11:20 – 11:40 Coffee break.**
- 11:40 V.K. Dugaev, (Institute for Problems of Materials Science, Chernovtsy)**  
V.F. Mitin, J. McFarland, G.G. Ihas.  
"Negative magnetoresistance in Ge films at ultralow temperatures".
- 12:00 P.V. Sorokin, (National Science Centre, Kharkov Institute Physics & Technology, Kharkov)**  
Arkatov Yu.M., Borisenko V.N., Lukhanin A.A., Mitin V.F., Murtazin R.T., Popov V.F.  
"Radiation tolerance of the Ge-film sensors of TTR-G and TTR-D models under the gamma, and electron irradiation".
- 12:20 V.V. Vainberg, (Institute of Physics, Kiev)**  
A.B. Aleinikov, F.M. Vorobkalo, I.Yu. Nemish.  
"Thermal resistance of germanium-bulk resistance thermometers in the temperature range from 0.4 to 4.2 K".
- 12:40 V.K. Dugaev, (Institute for Problems of Materials Science, Chernovtsy)**  
J. Barnas, J. Berakdar, V.F. Mitin.  
"Magnetoresistance of semiconductor magnetic nanostructures".
- 13:00 – 14:00 Lunch**

## Poster presentations

**Tuesday, 28 September 2004**

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**14:00 – 16:00**

1. V.V. Basanets, N.S. Boltovets, V.K. Dugaev, V.V. Kholevchuk, R.V. Konakova, P.M. Lytvyn, P.C. McDonald, V.F. Mitin, E.V. Mitin, I.Yu. Nemish, F. Pavese, I.V. Prokopenko, P.V. Sorokin, E.A. Soloviev, E.F. Venger. "Novel temperature sensors and multisensors developed under a European Project".
2. D. Ichim, F. Pavese, P. Ciarlini, J. Casas - Cubillos, Ch. Balle. "Advanced mathematical and statistical techniques for the automatic reduction of large datasets with an application to thermometry".
3. G.G. Ihas, V.F. Mitin, N. S. Sullivan. "Cryogenic mass gauging in a free-falling storage tank: - the use of Ge/GaAs resistance micro-thermometers in a cryogenic application".
4. I.I. Logvinov. "A simple practical linear thermometer based on Si transistor".
5. M.S. Boltovets, V.N. Ivanov, A.Yu. Avksentyev, A.E. Belyaev, A.G. Borisenko, O.A. Fedorovitsh, R.V. Konakova, Ya.Ya. Kudryk, P.M. Lytvyn, V.V. Milenin, A.V. Sachenko, Yu.N. Sveschnikov. "High temperature contacts to GaN and SiC based on TiBx nanostructure layers".
6. N.S. Boltovets, R.V. Konakova, V.V. Milenin, P.M. Lytvyn. "Electrical contacts to Hall sensors based on InSb/i-GaAs heterostructures".
7. V.V. Basanets, N.S. Boltovets, V.F. Mitin. "Design and production technology of multisensors".
8. I.V. Prokopenko, P.M. Lytvyn, V.P. Klad'klo, V.V. Kholevchuk, E.V. Mitin, V.F. Mitin. "AFM and X-Ray Investigations of Ge Films on GaAs Substrate".
9. V.V. Kholevchuk, V.F. Mitin, P.M. Lytvyn, I.V. Prokopenko, R.V. Konakova, E.V. Mitin. "Electrical properties of Ge films on semi-insulating GaAs substrates used for cryogenic sensors".
10. V.V. Kholevchuk, V.F. Mitin. "Thermal resistance of germanium-film resistance thermometers at 4.2 K".