7th International Workshop on Relaxor Ferroelectrics

Conference Program







7th – 12th of August 2022 Vilnius, Lithuania



WELCOME

Dear Colleagues,



On behalf of the Local Organising and Program Committees we are delighted to welcome you to the 7th International Workshop on Relaxor Ferroelectrics (IWRF) in Vilnius.

The 7th IWRF supposed to be held in 2020, but the pandemic situation left the organizing committee no other option but to postpone the workshop for two years. Finally,

the in-person meeting will be held in the Lithuanian Academy of Sciences.

The regular meetings were reestablished in 2013 in St. Petersburg although the first meetings were organized as early as 1996 and became biannual event. Later on it was held in Stirzin (Czech Republic), Matsue (Japan), Vancouver (Canada).

Laboratory of Microwave Spectroscopy of Vilnius University is honored to host this event. Vilnius University is the oldest university in the region. Its history dates back to 16th century. It is the largest university of Lithuania with long lasting traditions. We hope that the organization will meet the high standards which were set by the previous meetings.

This meeting will be concentrated on the further understanding of relaxor ferroelectrics and bridging theory and experimental results to be able to connect the microscopic picture to its unique macroscopic properties.

We wish you a pleasant stay in Vilnius and a fruitful scientific discussions during the conference!

Chairman of the conference

Prof. Jūras Banys

International advisory board

| Jan Dec | Poland |
|-------------------------|----------------|
| Takeshi Egami | USA |
| Peter Gehring | USA |
| Jirka Hlinka | Czech Republic |
| Kenji Ohwada | Japan |
| Sergey Vakhrushev | Russia |
| Wolfgang Kleemann | Germany |
| Yoshiaki Uesu | Japan |
| Andrew Bell | United Kingdom |
| Jūras Banys | Lithuania |
| Xiaoyong Wei | China |
| Mario Maglione | France |
| Annette Bussmann-Holder | Germany |
| Zuo-Guang Ye | Canada |

Programme committee

| Robertas Grigalaitis | Lithuania |
|-----------------------------|-----------|
| Šarūnas Svirskas | Lithuania |
| Jūras Banys | Lithuania |
| Zuo-Guang Ye | Canada |
| Peter Gehring | USA |
| Annette Bussmann-Holder | Germany |

Local organizing committee

Jūras Banys – chairman Robertas Grigalaitis Šarūnas Svirskas Mantas Šimėnas Martynas Kinka Eglė Martinaitytė Eidvidas Šatkauskas Žygimantas Logminas Eglė Šlinkšytė

Sponsors



Vilnius University



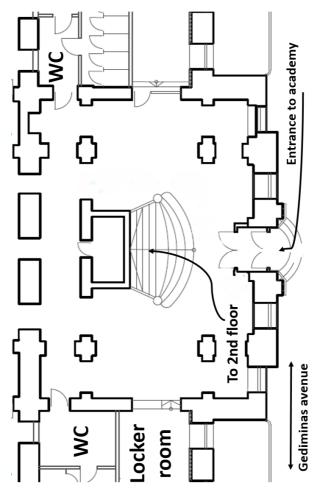
🗘 Go Vilnius

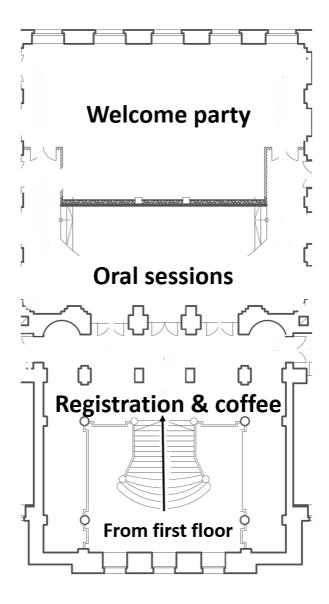


Venue

The address of Lithuanian Academy of Sciences is Gediminas avenue 3, LT-01103, Vilnius, Lithuania.

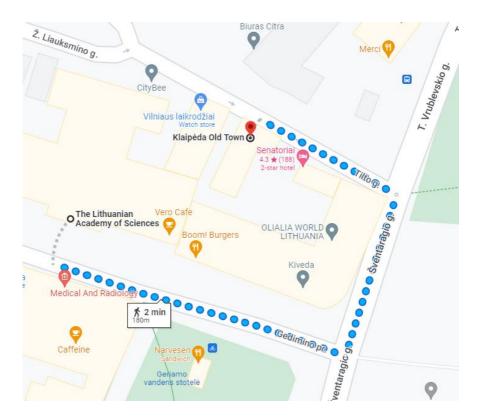
1st floor of Lithuanian Academy of sciences





7th International Workshop on Relaxor Ferroelectrics 7th-12th of August 2022, Vilnius, Lithuania

Lunch venue



Excursion and banquet



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Practical Information

The official language of the conference is English. There will only be oral presentations. Invited speakers are given 40 minutes for their talk. Regular presentations are 20 minutes.

Meeting hall will be equipped with PC, LCD projector and microphones. The date/hour/room of your presentation(s) is available in the Conference Program. If you are using a slide presentation make sure that you bring it on the USB stick. Supported file types: ppt, pptx, pdf, avi.

Note! If you are planning to use your own computer for presentation, please inform secretariat about that in advance.

| August 11th | | | | | | | | Excursion | | | | | | | | | |
|-------------|--------------|--------------|-------------------------|---------------------|------------|------------------|----------------|-------------------------|-------------------------|-------------------|-------|---------|---------------------------------------|-------------------------|-------|--------------------------|----------------------|
| August 10th | Bocitation | registration | ZG. Ye (Inv.) | Martin Kempa (Inv.) | P. Czaja | Š. Svirskas | Coffee Break | Brahim Dkhil (Inv.) | Krystian Roleder (Inv.) | A. Bussman-Holder | | Lunch | Free time Excursion and banquet | | | Excursion and banquet | |
| August 9th | Dorictuation | перыгации | Elena Buixaderas (Inv.) | lgor Levin (Inv.) | J. Banys | M. Pinto | Coffee Break | Petr Ondrejkovic (Inv.) | Mojca Otoničar (Inv.) | C. Il Cheon | | Lunch | Vladimir Shvartsman (Inv.) | ZG. Ye | | | |
| August 8th | Registration | Welcome word | Peter Gehring (Inv.) | Chris Stock (Inv.) | M. Šimėnas | Yu. Vysochanskii | Coffee Break | Marco Deluca (Inv.) | Jirka Hlinka (Inv.) | J. Spitaler | | Lunch | Andrew Rappe (Inv.) | Alexei Gruverman (Inv.) | | | |
| August 7th | | | | | | | | | | | | | | | | | Welcome reception |
| | 08:30 | 08:45 | 09:00 09:20 | 09:40 10:00 | 10:20 | 10:40 | 11:00 11:20 | 11:20 11:40 | 12:20 12:20 | 12:40 | 13:00 | - 15:00 | 15:00 15:20 | 15:40 | 16:20 | 16:40 17:00 | 19:00 |

Short Program

7th International Workshop on Relaxor Ferroelectrics 7th-12th of August 2022, Vilnius, Lithuania

Conference Program

Monday (8th of August)

| 8:30 | Registration | | | | | | | | |
|--------|------------------------------------------------------|------|--|--|--|--|--|--|--|
| 8:45 | | | | | | | | | |
| | | | | | | | | | |
| Oral s | ession 1 | | | | | | | | |
| Chairn | nan: prof. Jūras Banys | | | | | | | | |
| 9:00 | Peter Gehring | | | | | | | | |
| | Anharmonicity and Polar Nanoregions in | I1-1 | | | | | | | |
| | Photovoltaic Hybrid Organic-Inorganic | 11-1 | | | | | | | |
| | Perovskites | | | | | | | | |
| 9:40 | Chris Stock | | | | | | | | |
| | Broadband critical dynamics in organic- | I1-2 | | | | | | | |
| | inorganic lead-halide perovskites | | | | | | | | |
| 10:20 | Mantas Šimėnas | | | | | | | | |
| | Suppression of phase transitions and | 01-1 | | | | | | | |
| | glass phase signatures in mixed cation | 01-1 | | | | | | | |
| | halide perovskites | | | | | | | | |
| 10:40 | Yulian Vysochanskii | | | | | | | | |
| | On the origin of relaxor behavior in 3D | O1-2 | | | | | | | |
| | and 2D MM'P ₂ S(Se) ₆ ferroics | | | | | | | | |
| | | | | | | | | | |
| 11:00 | Coffee Break | | | | | | | | |
| | | | | | | | | | |
| | ession 2 | | | | | | | | |
| Chairn | nan: Elena Buixaderas | | | | | | | | |
| 11:20 | Marco Deluca | | | | | | | | |
| | Origin of relaxor behavior in BaTiO ₃ - | I2-1 | | | | | | | |
| | based lead-free perovskite ceramics | | | | | | | | |
| 12:00 | Jirka Hlinka | I2-2 | | | | | | | |

| | Polarization relaxation: about the shape, dynamics and role of coherently flipping nanoregions in Ba(ZrTi)O3 | |
|--------|--------------------------------------------------------------------------------------------------------------------|------|
| 12:40 | <i>Jürgen Spitaler</i> Advanced ab-initio approaches for the | O2-1 |
| | characterization of relaxor ferroelectrics | |
| 10.00 | | |
| 13:00 | Lunch | |
| | | |
| Oral s | ession 3 | |
| Chairn | nan: Peter Gehring | |
| 15:00 | Andrew Rappe | I3-1 |
| | | |
| | Relaxing in Weird Places | |
| 15:40 | Relaxing in Weird Places Alexei Gruverman | |
| 15:40 | | I3-2 |

Tuesday (9th of August)

| 8:30 | Registration | |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| | | |
| Oral s | ession 4 | |
| Chairn | nan: Jirka Hlinka | |
| 9:00 | Elena Buixaderas | I4-1 |
| 2.00 | What the hell is a uniaxial relaxor? | |
| 9:40 | Igor Levin Unraveling correlated disorder in relaxor Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ | I4-2 |
| 10:20 | Jūras Banys Dielectric spectroscopy and piezoelectric properties of lead-free BaTiO ₃ - xBi(Zn _{2/3} Nb _{1/3})O ₃ | O4-1 |

| 10:40 | Monica Pinto Salazar | |
|--------|--------------------------------------------------------------------------------|------|
| | ²³ Na Nuclear Magnetic Resonance | |
| | Longitudinal and Transverse Spin | O4-2 |
| | Relaxation times (T_1, T_2) Study of | |
| | Na _{1/2} Bi _{1/2} TiO ₃ -6mole%BaTiO ₃ | |
| | | |
| 11:00 | Coffee break | |
| | | |
| Oral s | ession 5 | |
| Charin | nan: Brahim Dkhil | |
| | Petr Ondrejkovič | |
| 11:20 | Neutron backscattering studies of relaxor | I5-1 |
| | ferroelectrics | |
| | Mojca Otoničar | |
| 12:00 | About the origins of the large nonlinear | I5-2 |
| | response in relaxor ferroelectrics | |
| | Chae Il Cheon | |
| 12:40 | Phase Evolution and Ferroelectric | 05-1 |
| 12.40 | Properties of BiFeO3-BaTiO3 Ceramics | 05-1 |
| | around Morphotropic Phase Boundary | |
| | | |
| 13:00 | Lunch | |
| | | |
| | ession 6 | |
| Chairn | nan: Krystian Roleder | |
| | Vladimir Shvartsman | |
| 15:00 | Relaxor terpolymers P(VDF-TrFE-CFE) | I6-1 |
| | for electrical energy storage | |
| | Zuo-Guang Ye | |
| 15:40 | Relaxor to Ferroelectric Crossover in the | O6-2 |
| 13.40 | Lead-Strontium Zirconate-Titanate | 002 |
| | Perovskite Solid Solution System | |

Wednesday (10th of August)

| 8:30 | Registration | |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| | | |
| Oral s | ession 7 | |
| Chairn | nan: Igor Levin | |
| 9:00 | Zuo-Guang Ye Optimization of Piezoelectric Properties of Relaxor-based Crystals via Domain Engineering | I7-1 |
| 9:40 | Martin Kempa Broadband dielectric properties of the BaTiO3-BaZrO3 solid solutions | I7-2 |
| 10:20 | Piotr Czaja Influence of dopant ions on mechanical and dielectric properties of K _{0.5} Bi _{0.5} TiO ₃ ceramics | 07-1 |
| 10:40 | Šarūnas Svirskas Dielectric and NMR studies of BaTi1- xSnxO3 solid solutions | 07-2 |
| | | |
| 11:00 | Coffee Break | |
| | ession 8 nan: Mojca Otoničar | |
| 11:20 | Brahim Dkhil Relaxors for neuromorphic computing | I8-1 |
| 12:00 | <i>Krystian Roleder</i> Domains populations and piezoelectric properties in PZT single crystals | I8-2 |
| 12:40 | Annette Bussmann-Holder | O8-1 |

| | Complex symmetry of phases and magnetic properties of the oxide perovskite EuTiO ₃ |
|-------|-----------------------------------------------------------------------------------------------------|
| 13:00 | Lunch |
| 17:00 | Excursion to the Palace of Grand Dukes |
| 18:00 | Banquet in the Palace of the Grand Dukes |

Thursday (11th of August)

| 10.00 | Excursion around the historical Vilnius |
|-------|-----------------------------------------|
| 10:00 | University ensemble |