

Директору ОИЯИ

академику РАН Г.В.Трубникову

от **Роде Судхир Пандуранг,**  
**научный сотрудник,**  
**Отделение №3,**  
**НЭОФСТИ, ЛФВЭ**

### **ЗАЯВЛЕНИЕ**

Прошу Вас допустить меня к участию в выборах на замещение  
вакантной должности

**научный сотрудник, Отделение №3, НЭОФСТИ, ЛФВЭ**  
( название должности, сектора, отдела, отделения, лаборатории)

Личная подпись, дата

12/01/2023



## Научная биография (Curriculum Vitae)

**научный сотрудник, Отделение №3 Физики адронов, НЭОФСТИ, ЛФВЭ**

(название занимаемой должности, отдела, сектора, отделения, лаборатории)

**Роде Судхир Пандуранг  
(Ф.И.О.)**

\*0 **ФИО; Роде Судхир Пандуранг**

\*1 **Дата и место рождения: 28/10/1993 — KAMARGAON, INDIA**

\*2 **Образование, научные степени, звание;**

- **Bachelor degree in Physics - 2012.**
- **Master degree in Physics - 2014.**
- **PhD in Physics - 08.12.2020**

\*3 **Профессиональная научная деятельность (по годам); указать темы по Проблемно-тематическому плану ОИЯИ, в которых Вы участвуете;**

- **Development of di-lepton program in MPD experiment and Study of collective flow and particle production using phenomenological models.**
  - **2021-22**
    - **Principle study of combinatorial background from Dalitz decays to the di-electron continuum.**
    - **Invited talk on Di-lepton prospects in MPD experiment: “ECT\* Workshop on Exploring High  $\mu$ B Matter With Rare Probes”.**
  - **2022-23**
    - **Realistic implementation of the principle study of combinatorial background within the limitations of MPD detector.**
    - **Study of various particlization scenarios provided by UrQMD hybrid model on collective flow and particle production.**

- **Invited talk on Di-lepton prospects in MPD experiment: DAE-BRNS CETHENP 2022.**

\*4 Научные интересы;  
- **Electromagnetic probes — Dileptons in heavy-ion collisions; Phenomenology of heavy-ion collisions.**

\*5 Научные труды (указать общее количество научных работ, изобретений);


- **Publications — <sup>14</sup>Jornal and Conference proceedings (9)**
- **Internal Notes (5)**
- **Conference/Workshop participation — Oral (7) and Poster (4)**

\*6 Премии и награды;

\*7 Контактные данные (раб.тел.; e-mail-адрес)

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Личная подпись и дата

12/01/2023  


# Publications

## Journal Publications:

1. **S. P. Rode, P. P. Bhaduri, A. Jaiswal and A. Roy**, “Kinetic freeze-out conditions in nuclear collisions with 2A - 158A GeV beam energy within a non-boost-invariant blast-wave model”, **Phys. Rev. C** **98** (2018) **2**, 024907, <https://arxiv.org/abs/1805.11463>, DOI:[10.1103/PhysRevC.98.024907](https://doi.org/10.1103/PhysRevC.98.024907)
2. **S. P. Rode, P. P. Bhaduri and A. Roy**, “Anisotropic flow of charged and identified hadrons at FAIR energies and its dependence on the nuclear equation of state”, **Eur.Phys.J. A** **55** (2019) **11**, 216, <https://arxiv.org/abs/1910.07717>, DOI:[10.1140/epja/i2019-12921-1](https://doi.org/10.1140/epja/i2019-12921-1)
3. **S. P. Rode, P. P. Bhaduri, A. Jaiswal and A. Roy**, “Hierarchy of kinetic freeze out parameters in low energy heavy-ion collisions”, <https://arxiv.org/abs/2004.04703>, **Phys. Rev. C** **102** (2020) **5**, 054912, DOI:[10.1103/PhysRevC.102.054912](https://doi.org/10.1103/PhysRevC.102.054912)
4. **S. K. Kundu, Y. Bailung, S. P. Rode, P. P. Bhaduri, and A. Roy**, “Dependence on beam energy and nuclear equation of state of anisotropic flow and particle production in low-energy heavy-ion collisions”, **Phys. Rev. C** **104** (2021) **2**, 024907, <https://arxiv.org/abs/2102.05967>, DOI:[10.1103/PhysRevC.104.024907](https://doi.org/10.1103/PhysRevC.104.024907)
5. **S. K. Kundu, Y. Bailung, S. P. Rode, P. P. Bhaduri, and A. Roy**, “Effect of various particlization scenarios on anisotropic flow and particle production using UrQMD hybrid model”, **Nuclear Physics A** **1030** (2023) 122574, <https://doi.org/10.1016/j.nuclphysa.2022.122574>.

## ALICE Paper Drafts:

1. **ALICE paper:** “Measurement of electrons from beauty-hadron decays in pp and Pb–Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV”, <https://arxiv.org/abs/2211.13985>, **Submitted to Phys. Rev. C**, <https://alice-publications.web.cern.ch/node/6791>. Paper Committee: Martin Andreas Volkl, Erin Frances Gauger, Jonghan Park, **Sudhir Pandurang Rode**, Deepa Thomas.
2. **ALICE paper:** “Inclusive and multiplicity dependent production of heavy-flavour hadron decay electrons in pp and p-Pb collisions”, In collaboration round,



[publications.web.cern.ch/node/6090](https://publications.web.cern.ch/node/6090), Paper Committee: Preeti Dhankher, Shreyasi Acharya, **Sudhir Pandurang Rode**, Deepa Thomas, Andrea Dubla.

### **Conference Proceedings:**

1. **S. P. Rode**, A. Roy and P. P. Bhaduri, "Differential elliptic flow of charged hadrons at FAIR SIS100", DAE Symp. Nucl. Phys. 62, 892, Patiala (2017), <http://www.symnpnp.org/proceedings/62/E45.pdf>
2. **S. P. Rode** on behalf of ALICE collaboration, "Production of electrons from Heavy-flavour hadron decays in different collision systems in ALICE at the LHC", DAE-BRNS Symposium on High Energy Physics (2018), IIT Madras [2018], <http://arxiv.org/abs/arXiv:1906.05570>
3. S. K. Kundu, Y. Bailung, **S. P. Rode**, P. P. Bhaduri, and A. Roy, "Dependence of anisotropic flow of net-protons on particlization model for various nuclear equation of state, DAE Symp. Nucl. Phys. 65, 650-651 (2022), <http://www.symnpnp.org/proceedings/65/E16.pdf>.
4. S. K. Kundu, Y. Bailung, **S. P. Rode**, P. P. Bhaduri, and A. Roy, "Dependence of anisotropic flow and particle production on particlization models and nuclear equation of state", Proceedings of Dynamics of Hot QCD Matter – Current status and developments, International Journal of Modern Physics E, <https://arxiv.org/abs/2208.13440>, <https://doi.org/10.1142/S0218301322500975>. (2022)

### **Internal Notes:**

1. **Preliminary Physics Summary (Public Note): S. P. Rode**, A. Dubla, "Measurements of low- $p_T$  electrons from semileptonic heavy-flavour hadron decays at mid-rapidity in pp collisions at  $\sqrt{s} = 7$  TeV", <https://cds.cern.ch/record/2317185?ln=en>. [2018]
2. **GSI Scientific report:** C. de Conti, A. Dubla, M. Faggin, S. Hornung, **S. P. Rode** for the ALICE collaboration, "Production of electrons from semileptonic heavy-flavour hadron decays in proton-proton and heavy-ion collisions measured with ALICE at the LHC", "RESEARCH-NQM-ALICE-6", <http://dx.doi.org/10.15120/GSI-2017-01856>. [2018]

**3. Analysis Note:** M. R. Ciupek, A. Dubla, S. Hornung, **S. P. Rode**, “Electrons from heavy-flavour hadron decays at mid-rapidity and low transverse momenta in pp collisions at  $\sqrt{s} = 7$  TeV and  $\sqrt{s} = 5.02$  TeV”, <https://alice-notes.web.cern.ch/node/782>. [2018]

**4. Analysis Note:** **S. P. Rode**, “Measurement of beauty decay electron cross-section in pp collisions at mid-rapidity and low transverse momenta in pp collisions at  $\sqrt{s} = 5.02$  TeV” <https://alice-notes.web.cern.ch/node/984>. [2019]

**5. Analysis Note:** **S. P. Rode**, “Electrons from heavy-flavour hadron decays at mid-rapidity and low transverse momenta in pp collisions at  $\sqrt{s} = 13$  TeV with low magnetic field ( $B = 0.2$  T)” <https://alice-notes.web.cern.ch/node/1019>. [2019]

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12/01/2023

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