# SARAT CENTENARY COLLEGE, DHANIAKHALI, HOOGHLY, WEST BENGAL
## FACULTY PROFILE

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|---|---|
| **NAME:** | DR. PRAMIT REJ |
| **DESIGNATION:** | ASSISTANT PROFESSOR |
| **DEPARTMENT:** | MATHEMATICS |
| **ACADEMIC QUALIFICATIONS:** | M.SC.(APPLIED MATH.), PH.D.( MATHEMATICS) |
| **CONTACT INFO.:** | pramitr@sccollegednk.ac.in |

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|---|---|
| DATE OF JOINING | 06 - 03 - 2017 (F.N.) |
| SPECIALIZATION | Fluid Mechanics and Quantum Mechanics (M.Sc.)<br>Quantum Scattering Theory (Ph.D.) |
| TEACHING INTEREST | Classical Algebra, Geometry, Differential Equation, Multivariate Calculus, Numerical Analysis, Computer Programming, Dynamics, Mechanics |
| TEACHING EXPERIENCE | 5 Years 10 Months (As On 31.12.2022) |
| AWARD & FELLOWSHIP | GATE 2012 (AIR- 189), CSIR UGC NET LECTURESHIP (December 2012) (AIR- 53), CSIR UGC NET JRF(UGC) (June 2013) (AIR- 70); Junior Research Fellowship (W.B. State-Funded), Junior Research Fellowship (UGC), Senior Research Fellowship (UGC) |
| MEMBERSHIP | Life Member of Calcutta Mathematical Society, Kolkata (Membership No.- LR/31)<br>Life Member of Indian Society of Atomic and Molecular Physics, Ahmedabad (Membership No.- 1559) |

**RESEARCH INTEREST:** Atomic and Molecular collisions in plasmas ; Atomic and Molecular structure in plasmas ; Interaction of positron and positronium with atoms ; Compact Star Modelling in Modified Gravity ; General Relativity

**RESEARCH EXPERIENCE:** From 30th July, 2013 to 30th September, 2013 as Junior Research Fellow (W.B. State- Funded) ,
From 1st October, 2013 to 30th September, 2015 as Junior Research Fellow (UGC),
From 1st October, 2015 to 5th March, 2017 as Senior Research Fellow (UGC)

| SEMINAR/ WORKSHOP PARTICIPATION | PRESENTED PAPER | | ATTENDED | | CHAIRED SESSION | |
|---|---|---|---|---|---|---|
| | NATIONAL | INTERNATIONAL | NATIONAL | INTERNATIONAL | NATIONAL | INTERNATIONAL |
| | 06 | 05 | 02 | NIL | NIL | NIL |

| PUBLICATIONS | JOURNAL ARTICLES | BOOK/BOOK CHAPTERS |
|---|---|---|
| | INTERNATIONAL- 20(PUBLISHED) | NIL |

***RESEARCH PUBLICATIONS*:**

**(1) Isotropic Buchdahl's relativistic fluid sphere within f(R,T) gravity, *New Astronomy*, 2023, 100, 101990 (DOI: 10.1016/j.newast.2022.101990) 2021 IF: 2.096 (WoS and Scopus)**

**(2) Model of hybrid star with baryonic and strange quark matter in Tolman–Kuchowicz spacetime, *International Journal of Geometric Methods in Modern Physics*, 2022, 19(7), 2250104 (DOI: 10.1142/S0219887822501043) 2021 IF: 1.873 (WoS and Scopus)**

**(3) Phantom energy-supported wormhole model in f(R,T) gravity assuming conformal motion, *International Journal of Modern Physics D*, 2022, 31(3), 2250016 (DOI: 10.1142/S021827182250016X) 2021 IF: 2.547 (WoS and Scopus)**

**(4) Tolman IV fluid sphere in f(R, T ) gravity, *Chinese Journal of Physics*, 2022, 77, 2201(DOI: 10.1016/j.cjph.2021.11.013) 2020 IF: 3.237 (WoS and Scopus)**

**(5) Stable and self consistent charged gravastar model within the framework of f (R, T ) gravity, *The European Physical Journal C*, 2021, 81(8), 763(DOI: 10.1140/epjc/s10052-021-09548-0) 2020 IF: 4.59 (WoS and Scopus)**

**(6) Finch-Skea star model in f (R, T ) theory of gravity, *International Journal of Geometric Methods in Modern Physics*, 2021, 18(10), 2150160 (DOI: 10.1142/S0219887821501607) 2020 IF: 1.874 (WoS and Scopus)**

**(7) Compact stellar model in the presence of pressure anisotropy in modified Finch Skea space-time, *Journal of Astrophysics and Astronomy*, 2021, 42, 74 (DOI: 10.1007/s12036-021-09739-x) 2020 IF: 1.27 (WoS and Scopus)**

**(8) Relativistic compact stars in Tolman spacetime via an anisotropic approach, *The European Physical Journal C*, 2021, 81(6), 531 (DOI: 10.1140/epjc/s10052-021-09340-0) 2020 IF: 4.59 (WoS and Scopus)**

**(9) Charged gravstar model in f ( T ) gravity admitting conformal motion,** ***International Journal of Geometric Methods in Modern Physics,*** **2021, 18(07), 2150112 (DOI: 10.1142/S0219887821501127) 2020 IF: 1.874 (WoS and Scopus)**

**(10) Charged compact star in f (R, T) gravity in Tolman–Kuchowicz spacetime,** ***The European Physical Journal C,*** **2021, 81(4), 316 (DOI: 10.1140/epjc/s10052-021-09127-3) 2020 IF: 4.59 (WoS and Scopus)**

**(11) Charged strange star in f (R,T ) gravity with linear equation of state,** ***Astrophysics and Space Science,*** **2021, 366(4), 35 (DOI: 10.1007/s10509-021-03943-5) 2020 IF: 1.83 (WoS and Scopus)**

**(12) Electron transfer in proton-hydrogen collisions in dense semi-classical hydrogen plasma,** ***Contributions to Plasma Physics,*** **2021, 61(4), e202000212 (DOI: 10.1002/ctpp. e202000212) 2020 IF: 1.563 (WoS and Scopus) [EDITOR'S CHOICE]**

**(13) Electron transfer in proton-hydrogen collisions in nonideal classical plasmas,** ***Contributions to Plasma Physics,*** **2020, 60(10), e202000080 (DOI: 10.1002/ctpp.202000080) 2019 IF: 1.226 (WoS and Scopus)**

**(14) Positron Impact Excitations Of Hydrogen Atom Under Lorentzian Astrophysical Plasmas,** ***Jurnal Fizik Malaysia,*** **2018, 39(2), 30001 (WoS ESCI)**

**(15) Positron scattering from hydrogen atom in dense quantum plasmas: Positronium formation in Rydberg states,** ***Physics of Plasmas,*** **2017, 24, 043506 (DOI: 10.1063/1.4979893) 2016 IF: 2.207 (WoS and Scopus)**

**(16) Excited-state positronium formation in positron-hydrogen collisions under weakly coupled plasmas,** ***J. Phys. B: At. Mol. Opt. Phys.,*** **2016, 49, 125203 (DOI: 10.1088/0953-4075/49/12/125203) 2015 IF: 1.833 (WoS and Scopus)**

**(17) Asymptotic cross section and scaling law: Positronium formation in Rydberg states in positron-hydrogen collisions,** ***Indian Journal of Physics,*** **2016, 90, 749 (DOI: 10.1007/s12648-015-0811-8) 2015 IF: 1.337 (WoS and Scopus)**

**(18) Positron impact excitations of hydrogen atom embedded in dense quantum plasmas: Formation of Rydberg atoms,** ***Physics of Plasmas,*** **2014, 21, 113509 (DOI: 10.1063/1.4901916) 2013 IF: 2.249 (WoS and Scopus)**

**(19) Positron impact excitations of hydrogen atom embedded in weakly coupled plasmas: Formation of Rydberg atoms,** ***Physics of Plasmas,*** **2014, 21, 093507 (DOI: 10.1063/1.4895491) 2013 IF: 2.249 (WoS and Scopus)**

**(20) Rydberg transitions for positron–hydrogen collisions: asymptotic cross section and scaling law,** ***J. Phys. B: At. Mol. Opt. Phys.,*** **2014, 47, 015204 (DOI: 10.1088/0953-4075/47/1/015204) 2012 IF: 2.031 (WoS and Scopus)**

## RESEARCH PROJECT/COLLABORATION/GUIDANCE: NIL

## COMPLETED CERTIFICATE COURSE:

Three MOOC for three to four months from CCE, IIT Kanpur conducted by Prof. H. C. Verma, Department of Physics, IIT Kanpur ;
One three weeks UGC Sponsored Orientation Program from UGC HRDC, Pt.RSU, Raipur during 07.01.2020 - 27.01.2020 ;
One two weeks UGC Sponsored Online Winter School from UGC HRDC, GU, Ahmedabad during 19.10.2020 - 01.11.2020 ;
Two four weeks MOOC and One three weeks MOOC through MOOKIT portal ;
Two sixteen weeks SWAYAM ARPIT (Session 2019-20) Online Certification courses through SWAYAM portal.

## COMPUTER SKILLS: Fortran 77, C, C++, Wolfram Mathematica, Latex, Ubuntu

## RESEARCHER ID:

Scopus: http://www.scopus.com/authid/detail.url?authorId=55969572200
Google Scholar: http://scholar.google.co.in/citations?user=Jd1tPrcAAAAJ&hl=en
ORCID: http://orcid.org/0000-0001-5359-0655
Web of Science ResearcherID: L-4005-2014
Vidwan-ID: 111256

## ANY OTHER INFORMATION/ADDITIONAL RESPONSIBILITY:

3rd Prize in Oral Presentation(Mathematics) in 2nd RSTC (WR), 2017 ;
Joint Convener, Admission Implementation Committee of Sarat Centenary College for the academic sessions 2017-18 and 2018-19 ;
College Nominee, CBCS Syllabus Moderation Workshop at Department of Mathematics, B.U. ;
Convener, B.A./B.Sc./B.Com. Part-III Computer Aided Numerical Practical Examination for Zonal Centre-2 of B.U. ;
Member, College Webinar Organizing Committees ;
Assistant Officer In Charge, B.A./B.Sc./B.Com. Part-III (Hons. / Gen.) Examination 2019 ;
External Subject Expert and Question Paper Setter of B.U. ;
Resource Person for Personal Contact Programme (PCP) of DDE, B.U.