Curriculum Vitae

1. **NAME :** Suresh Kumar Patra

2. **DATE OF BIRTH :** 14th April 1964

3. **NATIONALITY :** Indian

4. **SEX :** Male

5. **MARITAL STATUS :** Married

6. **ADDRESS :** Institute of Physics
Sachivalaya Marg
Bhubaneswar-751 005
India
E-MAIL : patra@iopb.res.in
TEL : (+91)-674-2306415
Cell : (+91)-9938399291 & 9853346157
FAX :(+91)-674-2300142

7. **EDUCATIONAL QUALIFICATION :**

(1) 1985 : **B. Sc. in Physics**

Sonepur College, Sonepur, India.

(2) 1985 – 1987 **M. Sc. in Physics**

Sambalpur University, Burla, India.

(3) 1988 – 1989 **Post M.Sc. in Physics**

Institute of Physics, Bhubaneswar, India.

(4) 1989 – 1994 **Ph.D. in Nuclear Physics Theory.**

Institute of Physics, Bhubaneswar, India.

TITLE OF RESEARCH TOPIC:

Relativistic Mean Field Study of Beta-stable and Beta-unstable Nuclei.

8. **RESEARCH EXPERIENCE:**

(1) 1994 – 1995 **Postdoctoral Research Fellow**

Department of Physics, Tohoku University, Sendai, Japan.

(2) 1995 – 1997 Postdoctoral Research Fellow
Institüt für Theoretische Physik, J.W.G. University, Frankfurt, Germany.

(3) 1997 – 1999 Postdoctoral Research Fellow
Department of Physics, CYCU, Chung-Li, Taiwan

(4) 1999 – 2001 Postdoctoral Research Fellow
Department of Physics, University of Barcelona, Barcelona, Spain

(5) November 29th – December 19th 2003. Visiting Fellow
Department of Physics, University of Barcelona, Barcelona, Spain

(9) June 2005 – December 2005 EPSRC Research Fellow
Department of Physics, University of Surrey, Guildford, U.K.

(10) April 2006 – June 2006 Re-visit in AvH Fellowship
Frankfurt Institute of Advanced Studies, Frankfurt/Main, Germany.

(11) 5th November 2007 – 19th November 2007 Visiting Fellow
Centro de Fisica das Interaccoes Fundamentals, Instituto Superior Tecnico-Edificio Ciencia (Fisica), 8th November 2007, Lisbon, Portugal

(12) 19th November 2007 – 28th November 2007
GSI, Darmstadt, for Research Collaboration

9. **POSITION HELD:**

(1) August 2001 – July 31st 2004 Sr. Lecturer
Institute of Physics, Sachivalaya Marg, Bhubaneswar, India

(2) 1st August 2004 – July 31st 2007 Asst. Professor
Institute of Physics, Sachivalaya Marg, Bhubaneswar, India

(3) 1st August 2007 – July 31st 2010 Reader-F
Institute of Physics, Sachivalaya Marg, Bhubaneswar, India

(4) 1st August 2010 – August 31st 2015 Associate Professor
Institute of Physics, Sachivalaya Marg, Bhubaneswar, India

(5) 1st July 2015 – till date Professor
Institute of Physics, Sachivalaya Marg, Bhubaneswar, India

10. **TEACHING EXPERIENCE:**

- Pre-doctoral (Post M.Sc.) course: Nuclear Physics, 2002, 2003, 2004, 2007, 2008, 2009, 2010, 2011, 2016, 2017.
- Pre-doctoral (Post M.Sc.) course: Advanced Quantum Mechanics, 2014-2015.
- SERC School on Nuclear Physics: TIFR, Mumbai 2014.
- SERC School on Nuclear Physics: IIT Roorkee, Roorkee 2015.
- SERC School on Nuclear Physics: University of Kashmir, Srinagar, 16 May to 6th June 2016.

11. **RECIPIENT OF FELLOWSHIPS:**

- Re-visit Alexander von Humboldt Research Fellow, Germany (April 2006-June 2006).
- EPSRC Research Fellow, Govt. of U.K., June-December (2005).
- Spain Education Ministry Fellowship, Spain (1999-2001).
- National Science Council Fellow, Taiwan, (1997-99).
- Alexander von Humboldt Research Fellow, Germany, (1995-97).
- Monbusho Research Fellow, Japan, (1994-95).
- Predoctoral and Doctoral Research Fellow, Institute of Physics, Bhubaneswar (1988-94).
- National Scholarship, (1985-87).
- Apart from the above, I had also been selected for a visiting lecturer in the University of Santa Catarina, Florianopolis, Brazil, FAFRJ Research Fellow (BRAZIL), FAPESP Research Fellow (BRAZIL), Postdoctoral Fellow in University of Tel Aviv, Israel, Postdoctoral Fellow in Institute of Super-Technique, Lisbon, Portugal, Visiting Scientist in University of Gent, Belgium.

12. **Participation in (completion of) major Projects :**

- Indo-German cooperation project: Search for superheavy isotopes: A new phenomenon, INT/FRG/BMBF/P-37/2006.
- DST project: Study of drip-line nuclei, No. SR/S2/HEP-22/2003.
- DST Project: Nuclear structure and nuclear reactions for drip line nuclei in relativistic models, SR/S2/HEP-16/2005.
- CSIR Project: Relativistic semi-classical calculation of giant resonances, No. 03(1060)06/EMR-II.
- DST Project: Study of high spin states in non-relativistic and relativistic mean field formalism with good rotational symmetry, SR/S2/HEP-26/2006.
- DST Project: Study of exotic drip-line nuclei, No. SR/S2/HEP-0010/2008.
- DST Project: Structure of high spin states, K isomers, super-deformed bands in nuclei (DST Project No. SR/S2/HEP-0037/2008).
- DST Project: Study of Structure and Decay of Super Heavy Nuclei (DST Project No. SB/S2/HEP-013/2013).

- DST Project: The project proposal entitled "Study of Structure and Spectroscopy of Nuclei near Drip-lines" (DST Project No. SR/S2/HEP-006/2013).

13. **SEMINAR/COLLOQUIUM/PRESENTATION GIVEN IN IMPORTANT PLACES:**

- Tidal deformity of neutrons and hyperons stars with relativistic mean field theory, DAE Symposium on Nuclear Physics, December 20-24, 2017, Thapar University, Patiala.
- Gravitational waves, Centurian University, Bhubaneswar, 27-07-2017.
- Tidal deformity of neutron and hyperon star with relativistic mean field theory, Ravenshaw University, Cuttack, 12-04-2017.
- Tidal deformibility of neutron and hyperon star with relativistic mean field equation of states, Department of Physics, Panjab University, Chandigarh, 15-18 March 2017, INTERNATIONAL CONFERENCE IN NUCLEAR PHYSICS WITH ENERGETIC HEAVY ION BEAMS.
- Ternary fission of ^{252}Cf using temperature dependent relativistic mean field approach, National conference on Nuclear and Accelerator Physics (NCNAP-2016), October 4-6, 2016. Central University of Jharkhand, Ranchi.
- The effect of self interacting isoscalar-vector meson on finite nuclei and infinite nuclear matter, Institute of Physics, Bhubaneswar, Nuclear Physics Meet 26-30 June 2016.
- The effect of self interacting isoscalar-vector meson on finite nuclei and infinite nuclear matter, Aligarh University, Aligarh, 15-16 February 2016.
- Nuclei and Applications: Neutron-rich thermally fissile nuclei, Orissa Physical Society, Maharshi College, Bhubaneswar
- Indira Gandhi Institute of Technology, Sarang, 19-21 March 2016.
- Gravitational wave from rotating neutron star, National seminar on Recent Advances in Physics 5th-6th, May 2014, Berhampur University.
- Gravitational wave from rotating neutron star, 6th Asian nuclear physics symposium, ANPhAS-2014, VECC, Kolkata, February 19-21, 2014.
- Gravitational wave from rotating neutron star, Indo-UK seminar on ISOLDE, Department of Physics, Panjab University, Chandigarh, January 21-23, 2014.

- Microscopic origin of NN interaction, National Conference on Double Beta Decay and Neutrinos, Department of Physics, IIT Ropar and Department of Physics, Panjab University, Chandigarh, April 20-21, 2013.

- The Puzzle of the Nucleus, Seminar given at Ravenshaw University, April 5, 2013.

- Microscopic origin of NN interaction, National Conference on Nuclear Physics, Department of Physics, Sambalpur University, March 1-2, 2013.

- Formation of Heavy elements in rapid neutron capture process, National Conference on Nuclear Astro-Physics, Department of Physics, Calcutta University, February 5-6, 2013.

- Formation of Heavy elements in rapid neutron capture process, National Conference on Nuclear Astro-Physics, Department of Physics, Calcutta University, February 5-6, 2013.

- The relativistic Lagrangian: Nucleon-nucleon potential, Int. Conf. on Recent trends in Nuclear Physics, 19-21 November 2012.

- Structure of neutron rich nuclei and new magic number, invited talk given at VECC in NUSTAR meet, March 2012.

- Invited talk given on Nuclear Energy, Centurian University, Bhubaneswar.

- Effective Nucleon-Nucleon Interaction and its application to Nuclear Radio Activity, invited talk given at Recent Advances in Science for Technology (RAST-2012), VSS University, Burla.

- Nucleon-Nucleon Interaction, Talk given at Department of Physics, Aligarh Muslim University, Aligarh, March 3, 2012.

- Fission of heavy Uranium and Thorium isotopes: source of new phenomena and dynamics, invited talk given at TIFR in NUSTAR meet, 21-22 February 2011.

- Application of relativistic mean field theory, Invited talk given in the National Seminar on "Contemporary Trend in Nuclear Physics", Aligarh Muslim University, Aligarh, October 21-22, 2010.

- Neutron-rich and superheavy nuclei: Relativistic mean field theory, Invited talk given at Workshop on "Simulation studies and large scale computing", IUAC, New Delhi, 31st October 2009.

- New islands of stability in the drip-line regions manifesting new phenomena, Frontiers in Gamma rays Spectroscopy, Tata Institute of Fundamental Research, Mumbai, India, March 2-4, 2009.

- Formation of superheavy and neutron-rich nuclei in astrophysical objects, Invited talk given at "National Seminar on Advences in Physics" Berhampur University, Orissa, February 6-7, 2009.

- Summary talk given at the DAE-BRNS Symposium (India) in Nuclear Physics, Indian Institute of Technology, Roorkee, December 22-26, 2008.

- Recent developments in relativistic mean field theory, Centro de Fisica das Interaccoes Fundamentals, Instituto Superior Tecnico-Edificio Ciencia (Fisica), 8th November 2007, Lisbon, Portugal.

- Clustering in nuclei, June 2006, Department of Physics, University of Barcelona, Spain.

- Relativistic Mean Field Formalism and its Application to finite nuclei, 17th November 2005, Department of Physics, University of York, U.K.

- Relativistic Mean Field Formalism and its Recent Developments, 9th October 2005, Department of Physics, University of Surrey, U.K.

- Relativistic Mean Field Formalism and its Recent Developments, presented at Int. Workshop on "Nuclear Structure at the Extremes: New Directions", Department of Physics, H.P. University, Shimla, India March 21-24, 2005.

- Nuclear Physics: Past, Present and Future, North Orissa University, Baripada, October 17, 2004.

- Lecture given on "Relativistic semiclassical calculation of isoscalar giant resonances" at the National Workshop on "Relativistic mean field theory in nuclear physics", Institute of Physics, Bhubaneswar, India during 26-31 st July, 2004.

- Lecture given on "Recent developments in relativistic mean field formalism" at the National Workshop on "Relativistic mean field theory in nuclear physics", Institute of Physics, Bhubaneswar, India during 26-31 st July, 2004.

- Invited talk given on "Field theory motivated effective Lagrangian approach: towards a complete relativistic nuclear model" at the National Conference on "Neutrinos in Nuclear, Particle and Astrophysics", held at I I T Kharagpur, India during 26-28 th Feb, 2004.

- Invited talk given on "Field theory motivated effective Lagrangian approach: towards a complete relativistic nuclear model" at the National Workshop on "Production & Utilization of Radioactive Ion Beams from ISOL type facilities", held at Toshali Sands Resorts, Puri, India during 16-19 th Feb, 2004, organised by VECC, Kolkata.

- Lectures given on "Scaling calculations of Isoscalar Giant Resonances in Relativistic Thomas-Fermi Theory" at the National Workshop, Puri (India) on "Nuclei at extremes of Isospin and Mass", Institute of Physics, Bhubaneswar, March 10−22 (2003).

- Invited talk on "Scaling calculations of Isoscalar Giant Resonances in Relativistic Thomas-Fermi Theory" at DAE-BRNS Symposium (India) in Nuclear Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, December 26−30 (2002).

- "Structure of Superheavy elements" Centro de Fisica das Interaccoes Fundamentals, Instituto Superior Tecnico-Edificio Ciencia (Fisica), Lisbon, Portugal.

- "Structure of Superheavy elements" Department of Physics, University of Barcelona, Barcelona, Spain.

- "The $k - i$ basis shell model: -Recent development of the Fermion Dynamical Symmetry Model," Department of Physics, University of Barcelona, Barcelona, Spain.

- "Relativistic Mean Field Theory and its application to negative energy states", Department of Physics, Chung Yuan Christian University, Chung-Li, Taiwan.

- Strong Correlation of the Vacuum in Relativistic Mean Field Theory, Institute of Physics, Bhubaneswar, India.

- "Anti-particle bound state in Relativistic Mean Field Theory", Nuclear Physics Institute, Academic of Sciences, Rez (Prague), Czech Republic.

- "Strong correlation of vacuum in the relativistic mean field theory", Department of Physics, University of Gottingen, Gottingen,

- "Halo-Structures of Light Exotic Nuclei", GSI, Darmstadt, Germany.

- "Negative energy bound states in relativistic mean field theory", Institut für Theoretische Physik, J.W.G. University, Frankfurt/M, Germany.

- "How far the magic number Z=82 is true in exotic nuclei ?", Department of Physics, Hong Kong University, Hong Kong.

- "Superdeformation in neutron-deficient rare-earth nuclei" Yukawa Institute, Kyoto, Japan.

- "Shape and superdeformed structure in rare-earth nuclei", Center for Mathematical Sciences, Office for Planing and Management, University of Aizu, Aizu-Wakamatsu, Japan.

- "Neutron- and proton-rich nuclei near the drip-lines and its astrophysical application", Department of Physics, Tohoku University, Sendai, Japan.

14. **PARTICIPATION IN SYMPOSIA, SCHOOLS and CONFERENCES:**

- National Seminar on "100 years of General Theory of Relativity", Department of Physics, Utkal University, Vani Vihar, Bhubaneswar, March 10-12, 2015.
- DAE-BRNS Symposium (India) in Nuclear Physics, Birla Institute of Technology, Pilani, December 22-26, 2011.
- Nucleon-nucleon interaction and Nuclear many-body problem, Tata Institute of Fundamental Research, Mumbai, 18-27 November, 2010.
- Int. Workshop on "Nuclear Structure at the Extremes: New Directions", Department of Physics, H.P. University, Shimla, India March 21-24, 2005.
- Workshop on "Hadron Physics", held at Toshali Sands Resorts, Puri, India March 7-17, 2005, organised by Institute of Physics, Bhubaneswar.
- Workshop on "Relativistic mean field theory in nuclear physics", Institute of Physics, Bhubaneswar, India during 26-31 st July, 2004.
- Workshop on "Nuclear astrophysics using low energy accelerators", Saha Institute of Nuclear Physics, Kolkata, India 29th April, 2004.
- "Production & Utilization of Radioactive Ion Beams from ISOL type facilities", held at Toshali Sands Resorts, Puri, India during 16-19 th Feb, 2004, organised by VECC, Kolkata.
- "National Conference on Neutrinos in Nuclear, Particle and Astrophysics", held at I I T Kharagpur, India during 26-28 th Feb, 2004.
- Workshop on "Nuclear structure and decay data: Theory and evaluation", 17-28 November 2003, The Abdus Salam International Centre for Theoretical Physics, Italy.
- Nuclear Structure and Decay Data: Theory and Evaluation, ICTP, Italy, November 17−28 (2003).
- DAE-BRNS Symposium (India) in Nuclear Physics, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, December 26−30 (2002).
- DAE-BRNS Symposium (India) in Nuclear Physics, Saha Institute of Nuclear Physics and Variable Energy Cyclotron Centre, Calcutta December 26−30 (2001).
- Spring School on Nuclear Physics, Sun-Moon Lake, Taiwan (1999).
- Physical Society of Republic of China, Academia Sinica, Taipei, Taiwan, (1999).

- 1998 School on Nuclear Physics and Few-Body Problem, Chi-theo, Taiwan (1998).
- Physical Society of Republic of China, Central National University, Chung-Li, Taiwan, (1998).
- Physical Society of Germany, Goettingen, (1997).
- International Conference on Physics of Unstable Nuclei, University of Niigata, Niigata, Japan, (1994).
- Structure of Unstable Nuclei, Yukawa Institute, Kyoto, Japan, (1994).
- National Symposium on Nuclear Structure, IUC Calcutta Centre, Puri, (1993).
- IV*th* SERC School on Nuclear Physics, Goa University, Goa, (1993).
- VIII*th* SERC School on High Energy Physics, Institute of Physics, Bhubaneswar, (1992).
- International Conference on Medium and High Energy Nuclear Physics, Saha Institute of Nuclear Physics, Calcutta, India (1991).
- Department of Atomic Energy (India) Symposium in Nuclear Physics, Madras, December, 1990, Bombay, December, 1991.
- SERC School on Nuclear Structure, Banarus Hindu University, Varanasi (1989).

15 A. **Ph.D. STUDENT SUPERVISION:**

I am the supervisor and co-supervisor of the following Ph.D. students.

1. Thesis Supervisor of Dr. B.K. Sharma (Ph.D. awarded)

   Title: Relativistic Nuclear Many-Body Problems

2. Thesis Co-supervisor of Dr. M.S. Mehta (Ph.D. awarded)

   Title: The Nuclear Structure Studies in the Drip lines and Superheavy Region using Relativistic Mean Field Formalism

3. Thesis Co-supervisor of Dr. A. Gangadeb (Thesis submitted)

   Title: Giant dipole resonance studies of rapidly rotating hot nuclei

4. Thesis Co-supervisor of Dr. R. N. Panda (Ph.D. awarded)

   Title: Nuclear reaction for exotic nuclei

5. Thesis Co-supervisor of Dr. M. Bhuyan (Ph.D. awarded)

   Title: Structure of drip-line and superheavy nuclei in effective relativistic and nonrelativistic interactions.

6. Thesis supervisor of Dr. S. K. Singh (Ph.D. awarded)

   Title: Application of Mean Field Theory to Nuclear Equation of State and Drip-line Nuclei.

7. Thesis supervisor of Dr. S. K. Biswal (Ph.D. awarded)

   Title: Nuclear Giant Resonances and Equation of States.

8. Dr. Tarun Kumar Jha (Ph.D. awarded)

9. Dr. Suchitra Mohapatro (Ph.D. awarded)

10. Thesis supervisor of Mr. Bharat Kumar

    Title: Nuclear Astrophysics

11. Thesis supervisor of Mr. Abdul Quddus

    Nuclear structure

12. Thesis supervisor of Mr. K. C. Naik *Nuclear structure*

15B. **Mentor of Postdoctoral students**

1. Prof. P. Arumugam
2. Prof. Amrutanshu Shukla
3. Prof. Ramesh Chandra
4. Prof. Santosh Kumar Agrawala
5. Prof. Bidhu Bhasan Sahu
6. Prof. BirBikram Singh
7. Dr. Chirashree Lahiri

16A. **COMMITTEE SERVICE:**

- Convener of the **REFRESHER COURSE FOR COLLEGE TEACHERS** for 2001, 2002, 2003, 2004.
- Co-ordinator of the **SUMMER STUDENT VISITING PROGRAMME (SSVP)** for 2005, 2006, 2007, 2008, 2009, 2011,2012, 2013.
- Convener of the **NATIONAL WORKSHOP ON RELATIVISTIC MEAN FIELD THEORY IN NUCLEAR PHYSICS**.
- Co-Editor of the proceeding: **RELATIVISTIC MEAN FIELD THEORY IN NUCLEAR PHYSICS**.

- Local Coordinator of the Joint Entrance Screening Test (JEST) (2008-till date).
- Local Co-ordinator of the OCES/DGFS (BARC Training School) Written Test Examination for 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013.
- Co-ordinator of the **SUMMER TEACHER VISITING PROGRAMME (STVP)** for 2011.
- Member of the Organization committee in the "National Conference on Nuclear Physics", 1-3, March 2013.
- Member of the Organization committee in the "National and International Symposium on Nuclear Physics" organised by DAE, Govt. of India.
- Member of the Organization committee in the "International Conference on Recent Trends in Nuclear Physics-2012 (ICRTNP-2012)", 19-21 November 2012, Chitkara University.
- Served in many internal committee of the Institute.

16B. **AWARDS & HONOURS:**

- (i)Referee: Journal of Physics G: Nuclear and Particle Physics.
- (ii) Referee: Physical Review C, Review of Modern Physics and Physical Review Letters.
- (iii) Referee: International Journal of Modern Physics E.
- (iv) Referee: PRAMANA: Journal of Physics.
- (v) Referee: Physics Letters B.
- (vi) Central European Journal of Physics.

17. COMPUTING EXPERIENCE :

I have worked in several computing environments, namely IBM/*TSO*, VAX/*VMS* and almost all Unix platforms supporting X-windows, *e.g.* Sun/*Solaris*, HP/*HP-UX*, DEC/*OSF/1*, SGI/*IRIX*, PC/*Linux etc.* I have extensively programmed in FORTRAN77 for my research work.

18. **LIST OF PUBLICATIONS :**

(a) Publications in Refereed Journals:-

1. GW170817: constraining the nuclear matter equation of state from the neutron star tidal deformability, Tuhin Malik, N. Alam, M. Fortin, C. Providencia, B. K. Agrawal, T. K. Jha, Bharat Kumarp and **S. K. Patra** Phys. Rev. **C** (accepted).

2. Nuclear Structure and Decay Modes of Ra Isotopes Within an Axially Deformed Relativistic Mean Field Model, Rashmirekha Swain, **S. K. Patra** and B. B. Sahui (accepted in Chinese Physics C).

3. Study of hot thermally fissile nuclei using relativistic mean field theory, Abdul Quddus, K. C. Naik and **S. K. Patra** J. Phys. **G:** (accepted).

4. New relativistic effective interaction for finite nuclei, infinite nuclear matter, and neutron stars, Bharat Kumar, **S. K. Patra** and B. K. Agrawal, Phys. Rev. **C97** (2018) 045806.

5. Effect of Deformation on Structure and Reaction of Al Isotopes using Relativistic Mean Field Densities in Glauber Model, R. N. Panda, M. Panigrahi, Mahesh K. Sharma and **S. K. Patra**, Indian J. of Physics (accepted for publication).

6. A Study of Multi-Λ Hypernuclei within Spherical Relativistic Mean-field Approach, Asloob A. Rather, M. Ikram, A. A. Usmani, B. Kumar and **S. K. Patra**, Brazilian Journal of Physics, **47** (2017) 628.

7. New parameterization of the effective field theory motivated relativistic mean field model Bharat Kumar, S. K. Singh, B. K. Agrawal, **S. K. Patra**, Nucl. Phys. **A** 966 (2017) 197.

8. Fission yield of neutron-rich thermally fissile nuclei within statistical model Bharat Kumar, M.T. Senthil kannan, M. Balasubramaniam, B. K. Agrawal, **S. K. Patra**, Phys. Rev. C 96 (2017) 034623.

9. Astrophysical S-factor of some (p-γ) reactions, K. C. Naik, R. N. Panda, A. Quddus and **S. K. Patra**, Brazilian Journal of Physics (accepted).

10. Exploration of nuclear matter and finite nuclei observables, **S. K. Patra**, S. K. Biswal, S. K. Singh and M. Bhuyan, Phys. Lett. B (communicated).

11. Decay Properties and Reaction Dynamics of Zirconium Isotopes in the Relativistic Mean Field Model, R. N. Panda, M. Panigrahi, Mahesh K. Sharma and **S. K. Patra**, International Journal of Modern Physics E (2018) (in press).

12. Evidence of a proton halo in ^{23}Al: A mean field analysis, R. N. Panda, M. Panigrahi, Mahesh K. Sharma and **S. K. Patra**, Physics of Atomic Nuclei, (2018) (in press).

13. The surface properties of neutron rich exotic nuclei: A source for studying the symmetry energy, M. Bhuyan, B. V. Carlson, **S. K. Patra** and Shan-Guia Zhou, Phys. Rev. **C97** (2018) 024322.

14. The attribute of rotational profile to the hyperon puzzle in the prediction of heaviest compact star, M. Bhuyan, B. V. Carlson, **S. K. Patra** and Shan-Guia Zhou, Int. J. Mod. Phys **E20** (2017) 1750052.

15. Structure effects on fission yields, Bharat Kumar, M. T. Senthil kannan, M. Balasubramaniam, B. K. Agrawal and **S K Patra** (Communicated to Phys. Lett. B).

16. Relative fragmentation in the ternary systems within the temperature-dependent relativistic mean-field approach, T. Senthil kannan, Bharat Kumar, M. Balasubramaniam, B. K. Agrawal and **S K Patra**, Phys. Rev. C **95** (2017) 064613.

17. Clustering effects and decay analysis of the light-mass N=Z and N not equal to Z composite systems formed in heavy ion collisions, Manpreet Kaur, BirBikram Singh, (**S. K. Patra** and Raj K. Gupta, Phys. Rev. C95, (2017) 014611.

18. Structural and decay properties of $Z = 132, 138$ superheavy nuclei, A. A. Rather, M. Ikram, A. A. Usmani, Bharat Kumar and **S. K. Patra**, European Physical Journal A - "Hadrons and Nuclei" 52 (2016) 372.

19. Tidal deformability of neutron and hyperon stars within relativistic mean field equations of state Bharat Kumar, S. K. Biswal and **S. K. Patra**, Phys. Rev. C95 (2017) 015801.

20. Search for halo structure in ^{37}Mg using the Glauber model and microscopic relativistic mean-field densities, Mahesh K. Sharma, R. N. Panda, Manoj K. Sharma and S. K. Patra, Phys. Rev. C 93, 014322 (2016).

21. Nuclear structure and decay properties of eveneven nuclei in Z = 70-80 drip-line region, S. Mahapatro, C. Lahiri, Bharat Kumar, R. N. Mishra and **S. K. Patra** Int. J. Mmod. Phys. E25 (2016) 1650062.

22. Effects of isovector scalar meson on hyperon star, S. K. Biswal, Bharat Kumar and **S. K. Patra** Int. J. Mod. Phys. E11 (2016) 1650090.

23. Quest for magicity in hypernuclei, M. Ikram, Asloob A. Rather, Bharat Kumar, S. K. Biswal and **S. K. Patra**, Int. J. Mod. Phys. E12 (2016) 1650103.

24. Modes of decay in neutron-rich nuclei, Bharat Kumar, S. K. Singh, S. K. Biswal and **S. K. Patra**, Int. J. Mod. Phys. **E 25** (2016) 1650020.

25. Effects on NN potentials on p nuclides in the $A \sim 100 - 120$ region, C. Lahiri, S. K. Biswal and **S. K. Patra**, Int. J. Mod. Phys. E25 (2016) 1650015.

26. Search for halo structure in ^{37}Mg using the Glauber model and microscopic relativistic mean-field densities, Mahesh K. Sharma, R. N. Panda, Manoj K. Sharma, and **S. K. Patra**, Phys. Rev. C **93** (2016) 014322.

27. Examining the stability of thermally fissile Th and U isotopes, Bharat Kumar, S. K. Biswal, S. K. Singh and **S. K. Patra** Phys. Rev. C **92** (2015) 054314.

28. Properties of superheavy nuclei with Z = 124,M. S. Mehta, Harvinder Kaur, Bharat Kumar and **S. K. Patra** Phys. Rev. C **92**, (2015) 054305.

29. The structural and decay properties of francium isotopes, M. Bhuyan, S. Mahapatro, S. K. Singh and **S. K. Patra**, Int. J. Mod. Phys. **E23** (2015) 1550028.

30. The effect of self interacting isoscalar-vector meson on finite nuclei and infinite nuclear matter, S. K. Biswal, S. K. Singh, M. Bhuyan and **S. K. Patra**, Brazilian Journal of Physics, **45** (2015)347.

31. Softness of Sn isotopes in semi-classical approximation, S. K. Biswal, S. K. Singh, M. Bhuyan and **S. K. Patra**, Mod. Phys. Lett. **A30** (2015) 1550097.

32. Effects of isovector scalar $\delta-$meson on $\Lambda-$hypernuclei, M. Ikram, S. K. Singh, S. K. Biswal and **S. K. Patra**, Int. J. Mod. Phys. **E24** (2015) 1550019.

33. Shape co-existence and parity doublet in Zr isotopes, Bharat Kumar, S. K. Singh and **S. K. Patra**, Int. J. Mod. Phys. **E24** (2015) 1550017.

34. Nuclear Structure study of some bubble nuclei in light mass region using mean field formalism, R. N. Panda, M. K. Sharma and **S. K. Patra**. Chinese Physics **C39** (2015) 064102.

35. Evaporation residue in the fission state of Barium nuclei within relativistic mean field theory, M. Bhuyan, **S. K. Patra** and Raj K. Gupta, J. Phys. **G42** (2015) 015105.

36. Study of reaction cross section of light mass nuclei using Glauber formalisms, R. N. Panda, M. K. Sharma, M. K. Sharma and **S. K. Patra** Brazilian Journal of Physics, **45** (2015) 138.

37. Formation of medium-heavy elements in rapid neutron capture process, S. K. Singh, M. Ikram and **S. K. Patra**, Journal Of Nuclear Physics, Material Sciences, Radiation and Applications, **2** (2014) 1.

38. A relativistic mean field study of multi-strange system, M. Ikram, S. K. Singh, A. Usmani and **S. K. Patra**, Int. J. Mod. Phys. **E23** (2014) 1450052.

39. Isoscalar giant monopole resonance for drip-line and super heavy nuclei in the framework of a relativistic mean field formalism with scaling calculation, S. K. Biswal and **S. K. Patra**, Cent. Euro. J. Phys. **12**, (2014) 582.

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