



CURRICULUM VITAE

- 1 (i) Name:** : **DR. APRAMITA CHAND**
- (ii) Nationality** : Indian
- (iii) Date of Birth** : 13.08.1990
- (iv) Contact Information** : 8075439824
apramita.chand@gmail.com
- (v) Broad Area of Research** : Molecular dynamics simulation studies, Hydrogen bonding networks and solvation behavior of bio-molecules

2.) Academic qualifications

Examination	Year	Board	%Marks	Special Remarks
10th	2006	ICSE	94.2%	99 in Maths,>90% in all subjects
12th	2008	CBSE	93.2%	100/100 in Chemistry, Listed among Top 0.1% of students of CBSE
B.Sc	2011	Utkal University	90.5%	Best Graduate, 92% Hons(Chem.), (Gold Medal)
M.Sc	2013	Utkal University	83.2%	Batch Topper (Gold Medal)
Ph.D Coursework	2013-14	IIT BBSR	9.67 CGPA	Batch Topper
Ph.D	2019	IIT BBSR		Awarded

3) Ongoing Academic Courses

Pursuing MA in Education at IGNOU (final year)
Pursuing PG Diploma in Higher Education (second semester)

4) Research, Teaching, & Guidance Experience

1. **Postdoctoral Fellow** at National Institute of Science Education and Research (NISER) – (1.02.2019 to 01.08.2020)
2. **CSIR Research Fellow** at Indian Institute of Technology, Bhubaneswar from 17.07.2013 –17.07.2018

PhD Thesis entitled “Exploring the influence of various co-solvents on the structure, dynamics and hydrogen bond properties in the peptide bond environment: a molecular dynamics simulation study”
3. **DST SHE Project Intern** at National Institute of Science Education and Research (May-August,2011)
4. **Assistant Professor in Chemistry** at RIE Bhubaneswar since 16.09.2021 – 15.01.2024
5. **Guided six final year dissertation projects** at undergraduate level at RIE Bhubaneswar.

5) Scholarships, Honors and Associations:

1. **Utkal University Gold Medal for Topping M.Sc examination** (2013)
2. **Shri Gopalchandra Memorial Gold Medal for being Best Graduate** (2011)
3. **DST INSPIRE (SHE) Scholarship** by Department Of Science and Technology (2008-2013)
4. **P.G. Scholarship** awarded by the Institute of Mathematics and Applications, Bhubaneswar (2012)
5. **CBSE Merit Scholarship** (2008)
6. **Subhadra Devi and Parvati Mishra Memorial Awards from Orissa Chemical Society (2013)** for securing highest rank in GATE and highest marks in M.Sc examination in the state
7. Council of Scientific and Industrial Research – National Eligibility Test (**CSIR-NET-JRF**) –All India Rank (**AIR**)-54, **CSIR JRF (2013-15)**, **CSIR SRF (2015-18)**
8. Graduate Aptitude Test for Engineering (**GATE-Chemistry**)-2013, **AIR-150**
9. **Best Poster Presentation Award (2016)** held on Research Scholar’s Day (IIT BBSR).
10. **Member of Senate, Utkal University (2011-2012)**
11. **Member of Senate, IIT Bhubaneswar (2016-2017)**
12. **Member of Royal Society of Chemistry (2018- till date)**
13. **Executive Board Member** of Family Planning Association of India
14. **Patron Member of Alumni Association**, Department of Chemistry, Utkal University

6) Research Articles

1. Chand, Apramita, and Snehasis Chowdhuri. "Effects of dimethyl sulfoxide on the hydrogen bonding structure and dynamics of aqueous N-methylacetamide solution." *Journal of Chemical Sciences* 128.6 (2016): 991-1001.
2. Chand, Apramita, and Snehasis Chowdhuri, "Behaviour of aqueous N-methylacetamide solution in presence of ethanol and 2, 2, 2 tri-fluoroethanol: Hydrogen bonding structure and dynamics." *Journal of Molecular Liquids* 224 (2016): 1370-1379.
3. Chand, Apramita, et al. "Effects of trimethylamine-N-oxide (TMAO) on aqueous N-methylacetamide solution: A comparison of different force fields of TMAO." *Journal of Molecular Liquids* 225 (2017): 926-935.
4. Pragin Chettiyankandy, Apramita Chand and Snehasis Chowdhuri, "Effects of concentration and temperature on solvation structure and dynamics in aqueous HMTA solution", Conference Proceedings of 7th-DAE-BRNS Symposium on Emerging Trends in Separation Science and Technology 5 (2016): 30-38.
5. Chand, Apramita, and Snehasis Chowdhuri, "A comparative study of hydrogen bonding structure and dynamics in aqueous urea solution of amides with varying hydrophobicity: Effect of addition of trimethylamine N-oxide (TMAO)." *Journal of Molecular Liquids* 242 (2017): 70-81.
6. Chand, Apramita, Pragin Chettiyankandy and Snehasis Chowdhuri, "Behaviour of cis- and trans-N-methylformamide in liquid mixture: Dynamical properties at varying pressure and temperature, and ion solvation scenario." *Journal of Molecular Liquids*, 269(2018), 241-251.
7. Chand, Apramita, and Snehasis Chowdhuri. "Pressure effects on solvation structure and dynamics in mixture of cis and trans-N-methylformamide in a protic and aprotic polar solvent." *Journal of Indian Chemical Society* 96 (2019): 895-906. ISSN-194522
8. Pragin Chettiyankandy, Apramita Chand, Rajesh Ghosh and Snehasis Chowdhuri, "Effects of HMTA on the aqueous solution structure, dynamics and ion solvation scenario: concentration and temperature dependent study with potential HMTA models", *Journal of Molecular Liquids* 296 (2019): 111820
9. Chand, Apramita and Himansu S. Biswal, Review Paper on "Hydrogen bonding in chalcogens: Looking beyond the Second Row of the Periodic Table", *Journal of Indian Institute of Science*, 100 (2020): 77-100
10. Dipak Kumar Sahoo, Apramita Chand, Subhrakant Jena and Himansu S. Biswal, "Hydrogen-bond-driven thiouracil dissolution in aqueous ionic liquid: A combined microscopic, spectroscopic and molecular dynamics study." *Journal of Molecular Liquids* 319 (2020): 114275.
11. Chand, Apramita, Dipak Kumar Sahoo, Abhijit Rana, Subhrakant Jena, and Himansu S. Biswal. "The prodigious hydrogen bonds with sulfur and selenium in molecular assemblies, structural biology, and functional materials." *Accounts of Chemical Research* 53, no. 8 (2020): 1580-1592.
12. Chand, Apramita, K.Sandeep Rao and Snehasis Chowdhuri "A Molecular Dynamics

Simulation Study of Osmolyte Effects on Solution Conformations of [Met]-Enkephalin” In *AIP Conference Proceedings* 2369, no. 1 (2021): p. 020119. AIP Publishing LLC, 2021.

13. Chand, Apramita, Pragin Chettiyankandy, Rajesh Ghosh, Chinmay Parida and Snehasis Chowdhuri, “**Hydrogen Bond Structure and Dynamics of cis and trans conformers of N-methylformamide in water, DMSO and water-DMSO mixtures of varying compositions**” *Journal of Molecular Dynamics*, 361 (2022) 119610.
14. Parida, Chinmay, Pragin Chettiyankandy, Apramita Chand, and Snehasis Chowdhuri. "Effects of Urea on the Aqueous Solvation Structure and Dynamics of cis/trans-N-methylformamide: An Insight from Molecular Dynamics Simulation Study." *Chemical Physics Impact* (2023): 100448.

Popular science article titled “**Quantum computing: New Directions In Chemistry**” published in Volume 8, Issue 5 (May, 2023) edition of Science Horizon journal published by Odisha Bigyan Academy

7. Book Chapters

1. Chand, Apramita, et al. "**Computational Methods for Developing Novel Antiaging Interventions.**" *Molecular Basis and Emerging Strategies for Anti-aging Interventions.* Springer, Singapore, 2018. 175-193, ISBN: 978-981-13-1698-2,
2. Chand, Apramita, Pragin Chettiyankandy, and Snehasis Chowdhuri. "**Application of Computer Simulation in Exploring Influence of Alcohol on Aqueous Milieu of a Gut-Brain Octapeptide, Cholecystokinin-8.**" *Soft Computing for Problem Solving.* Springer, Singapore, 2019. 25-40. ISSN: 2194-5357, ISBN: 978-981-13-1594-7

Independent Academic E-Book titled ‘**Computer Simulations of Proteins and Peptides - Vol 1**’ published online with ASIN: B0BBMNYTHH

7) Experience in Administrative Work and Conducting Training Programmes

1. **Resource Person** in module development as well as training of Chilika block in- service teachers and pre-service teachers at RIE, Bhubaneswar for development of ‘Learning Resource Centre’
2. **Academic Counsellor** Empanelment at IGNOU
3. Member of **Energy Audit** committee, **National Kala Utsav organizing** committee, and **NAAC Accreditation committee** at Regional Institute of Education
4. **Program supervisor** of ‘Planning and Organization of Multi-Cultural Exposure of Pre-Service Teachers in nine schools of Dhenkanal.
5. **Resource Person** in module development as well as training for 5-Days Capacity Building of KRPs of Aspirational districts of Odisha and Bihar on effective use of Science Laboratory in secondary schools of Odisha and Bihar
6. **Resource Person** in International Webinar on ‘**Coping With Covid-19: Higher Education in Global Scenario**’ at Indira Gandhi National Tribal University (2020)

8) Paper Presentations/ Invited Talks/Previous Research Projects-

1. **Invited Lecture and Paper Presentation** at International Conference ICragSD-2023-Akal University, Talwandi Sabo, 6-8th September, 2023 on “Molecular dynamics simulations as a green alternative in elucidation of protein structure and interactions: A case study of human beta-defensins”
2. **Poster Presentation** on cocrystals at the Indian Science Congress Association, organized at KIIT University (2023)
3. **Oral Presentation** at the **National Conference on Physics and Chemistry of Materials. Organized in virtual mode** (2020)
4. **Resource Person** in International Webinar on ‘**Coping With Covid-19: Higher Education in Global Scenario**’ at Indira Gandhi National Tribal University (2020)
5. **Oral Presentation** at the ‘**Recent Topics in Statistical Mechanics**’ Conference held at NISER, Bhubaneswar (2019)
6. **Oral Presentation** at the **Workshop and Symposium on Advanced Simulation Methods: DFT, MD and Beyond** (ASM-2019), IIT Delhi (2019)
7. **Oral Presentation** at **International Conference on Soft Computing for Problem Solving** (SocPros), IIT Bhubaneswar (2017)
8. **Poster Presentation** at **Asia-Pacific Conference on Theoretical and Computational Chemistry (APCTCC-8)**, IIT, Bombay (2017)
9. **Oral Paper Presentation** at **Soft Computing for Problem Solving Conference (SocPros)**, IIT Bhubaneswar (2017)
10. **Paper Presentation** at Annual Conference of Orissa Chemical Society, KIIT University (2016)
11. **Invited Lecture** on ‘Hydrogen Bonding: Insights from Molecular Dynamics Simulations’ at Dept. of Chemistry, Utkal University (2016)
12. Summer **Research Project** entitled ‘Synthesis and characterization of N-confused porphyrins’ at NISER (2011).
13. ‘Innovations in Environmental Technologies’-At UGC sponsored seminar at Dept. of Botany, B.J.B College (2012)
14. Work on analysis of hydrogen bonding patterns in co-crystals (structures enlisted at Cambridge Crystallographic Data Centre) at the pre-doctoral stage.

9) **Short Term Courses/Workshops for Skill Development**

1. **Workshop on New IPR at CSIR, IMMT Bhubaneswar (June, 2023)**
2. **Consultation Workshop on Curriculum for Preparatory, Middle and Secondary Stage for Development of National Curriculum Framework organised by RIE, Bhubaneswar (December, 2022)**
3. **Eastern Region Consultation Workshop on National Curriculum Framework jointly organised by Regional Institute of Education and SOA (August, 2022)**
4. **Online Faculty Development Program on Research Methodologies: Tools & Techniques, organized by IES, Bhopal (Jan, 2022)**
5. **Microsoft Technology Associate Program on Introduction to Programming In Python (2020)**
6. **IYPT Short Term Certification Course from UNESCO (2019)**
7. **‘Mumbai Workshop on Quantum Chemistry (MWQC-2019)’ conducted at IIT Powai (2019)**
8. **Diploma in Educational Psychology from Alison E-learning portal (2017)**
9. **e-Workshop on ‘Molecular Simulations and Dynamics: Insights of Computational Bio-physics’ conducted by Bio-discovery Group, India (2017)**
10. **C Programming Course from APTECH India (2016)**
11. **GIAN (Global Initiative for Academic Networks) Workshop on Computational Electronic Structure Methods, IIT Bhubaneswar (2016)**
12. **PG Diploma in ChemInformatics from ICIS, India (2015)**
13. **UGC-XII Plan Sponsored Skill Based workshop on “Advances in Chemical Sciences”, Utkal University (2015)**
14. **Science Communication Workshop organized by NISCAIR at NISER, Bhubaneswar (2014).**
15. **Fascination of Crystals and Symmetry Online Course from iversity portal. (2014)**
16. **Scientific Writing and Publishing Workshop organized by American Society of Microbiology at KIIT, Bhubaneswar (2012)**
17. **SkillSoft Courses on Institutional and Organizational Assessment, Environment Impact Assessment organized online by Inter-American Development Bank (2008)**
18. **Nanotechnology Sensitization Program by Nano science and Technology Consortium. (2006)**

10) Extra-Curricular Activities (Prize/Medal/Certificate)

1. 1ST prize winner of **National Level Science Essay And Quiz Competition** organized by Indian Science Congress (2012).
2. 1ST prize winner of **Chancellor's Cup Debate Competition** (2011-12) and **Vice Chancellor's Cup** (2009).
3. 1ST prize winner of **R.T.I shield in Debate** Competition organized by Orissa Information Commission at Ravenshaw University (2011)
4. 1ST prize winner of **Inter University, Inter College Debate** organized by Indian Association of Parliamentarians AT Utkal University (2009 and 2011)
5. 1ST prize winner of **Vigilance Awareness Week Inter-University Debate** Competition at Utkal University
6. 1ST prize winner of **Inter-College Essay Writing** Competition organized by SCB Medical College, Cuttack (2010)
7. Twice Recipient of **Rajiv Gandhi Prativa Award** in 2008 (for being among the best 10 students in Intermediate Exam) and in 2010 (for significant achievements in literature.)
8. 1ST prize winner of **Inter University, Inter College Debate** organized by Jansankhya Sthirata Kosh at KIIMS (2010)
9. Odissi Dancer certified by Pracheen Kala Kendra, Chandigarh.
10. **HelpAge India and Project Anjali Award** organised by Disabled Peoples International and Swabhiman, Bhubaneswar