CURRICULUM VITAE

Dr. M. PONMURUGAN

Assistant Professor,
Department of Physics,
School of Basic and Applied Sciences,
Central University of TamilNadu,
Thiruvarur- 610005, Tamilnadu, INDIA
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Academic Qualificationss:

2009: ***Ph.D.*** **(Physics)**

Materials Science Division, Indira Gandhi Centre for Atomic Research,
Kalpakkam, Tamil Nadu, India.
Thesis Title: *"Studies on Stochastic Growth models of Interacting Self Avoiding Walks"*

1998: ***M.Sc.*** **[Physics]**

Percentage marks/ CGPA : 83%

Pachaiyappa's College, University of Madras, Chennai, Tamil Nadu, India.

Positions Held:

Assistant Professor: (Jan 2012 – Present)
School of Basic and Applied Sciences, Central University of Tamil Nadu, Thiruvarur, Tamil Nadu.

Post-Doctoral Fellow:
Institute of Mathematical Sciences, C.I.T Campus, Taramani-600113, Tamil Nadu, India. (2010-2012)
Department of Mathematics, University of Reading, Reading RG6 6AX, Berks, UK. (2008 – 2009)

Lecturer : *Department of Physics, D.G. Vaishnav College, Arumbakkam, Chennai, India 1999 - 2002*

Academic awards / Honors / Fellowships / Achievements:

- Department of Science and Technology **Fast Track Young Scientist Fellow** 2010.
- Qualified **CSIR (NET) Junior Research Fellowship**, conducted jointly by CSIR and UGC. Ranked **within top 20 percentile** of those successful in the year 2001.
- Qualified in the **State Level Educational Testing (SLET)** accredited by UGC and conducted by the Government of Tamil Nadu in March 1999.
- Qualified Graduate Aptitude Test in Engineering **(GATE)** in the year 1998.
- **University Rank holder** in the Postgraduate Physics, University of Madras, Chennai, Tamil Nadu (1998).

Research Interest:

- Statistical Mechanics
- Soft Condensed Matter Physics
- Non-equilibrium work relations
- Lattice models of polymers
- Polymer melts
- Monte Carlo, Molecular Dynamics
- Machine/Deep Learning
- Irreversible thermodynamics
- Feedback and information
- Quantum thermodynamics

Personal Profile:

Sex	Male	***Date of birth***	April 25, 1976
Marital Status/Family	Married /one Child	***Nationality***	Indian.

Academic and Administrative Activities:

1. Court Member, Central University of Tamil Nadu, March 2022- present.
2. Board of Studies Member, (UG: Physics), Manonmaniam Sundaranar University, April 2020 – present
3. Board of Studies Member, Department of Mathematics, Central University of Tamil Nadu, November 2022 – present
4. Academic Council Member, Central University of Tamil Nadu, April 2013- January 2016.
5. Board of Studies Member, School of Basic and Applied Sciences, Central University of Tamil Nadu, July 2018 – July 2021.
6. Board of Studies Member, Department of Physics, Central University of Tamil Nadu, March 2016 - April 2019.
7. Entry in to Service Cell, Coordinator, Central University of Tamil Nadu, July 2015- present
8. Exam and Time Table coordinator, different committee members, Department of Physics, Central University of Tamil Nadu, January 2012 – present
9. Evaluator and Question paper setter for various State and Central universities and Organizations.
10. Referee for various Physics, Computation, and Education related Journals (Phys. Rev. E, Physica A, SAGE open…)
11. Book Chapters/contents reviewer for Cambridge University Press and Wiley-India.

Invited Lectures/Talks:

1. Invited Talk, Materials Research Society of India, Kalpakkam Chapter, Material Science Group, Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu, India,

September 27, 2022, *Title:"Non-Boltzmann sampling technique and its application in Physical systems"*

2. Invited Lecture:, Department of Physics, Dr. N.G.P. Arts and Science College, 5-6-2021, Coimbatore, Tamil Nadu, India, *Title: "Revisiting Thermodynamics".*

3. Invited Lecture: Department of Physics, Dwaraka Doss Goverdhan Doss Vaishnav College, Arumbakkam, Chennai, Tamil Nadu, 6-1-2021, *Title: "Recent views on Laws of Thermodynamics".*
4. Summer Training Programming in Physics, The Academy of Sciences, Chennai and Department of Nanoscience and Technology, Bharathiar University, 16-7-2020. Coimbatore, Tamil Nadu, India, *Title: "Statistical Mechanics".*

5. Virtual Workshop on Collating Physics Resources for Teachers in Higher Education, National Resource Centre for Education, 19-8-2020, New Delhi, India, *Title: "Computational Statistical Mechanics".*

6. International conference on computer simulation in natural sciences (SIMSCI 2018), 16-4-2018, Chennai , Tamil Nadu, India, *Title: "Jarzynski equality estimation of free energy differences of fast switching bimolecular simulation ".*

7. Hale Bopp Club invited lecture, Cauvery College for Women, Trichy, Tamil Nadu, India, September 21, 2018. "*Delivered lectures on How to learn physics*".

8. Lectures in Physics, SIVET College, Gowrivakkam, Chennai, Tamil Nadu, India March 8, 2013 "Delivered lectures on *Heat and Thermodynamics*".

9. Workshop on Computational Physics, School of Physics, Madurai Kamaraj University, Madurai, Tamil Nadu, India, August 30-31, 2013. "Delivered lectures on *An introduction to Monte Carlo technique*".

10. Lecture delivered in Free Coaching Classes for UGC (CSIR) – NET/SET Examinations, 4th March 2012, Department of Nanoscience and Technology, Bharathiar University, Coimbatore, Tamil Nadu India.

11. Structure and Thermodynamics of Emerging Materials (STEM -2011), Physical Metallurgy group, Indira Gandhi Centre for Atomic Research, Kalpakkam, India, November 24 -26 2011. "Conducted tutorials for Monte Carlo basics related to diffusion mechanism".

12. Workshop and Conference on Monte Carlo Simulation, School of Physics, Madurai Kamaraj University, Madurai, Tamil Nadu, India, August 9-13, 2010. "Conducted tutorials for Monte Carlo basics and delivered lectures on *Monte Carlo simulation of growth models of polymers*".

Journal Publications:

1. *"Crystal growth and magnetic properties of the coupled alternating S=1 spin chain $Sr_2Ni(SeO_3)_3$"* R. Madhumathy, K. Saranya, K. Moovendaran, K. Ramesh Babu, Arpita Rana, Kwang-Yong Choi, Heung-Sik Kim, Wei-Tin Chen, M. Ponmurugan, R. Sankar, and I .Panneer Muthuselvam, Physical Review B **107**, 214406 (2023). https://doi.org/10.1103/PhysRevB.107.214406

2. *"Spin-singlet ground state of the coupled J_{eff} =1/2 alternating chain system $Sr_2Co(SeO_3)_3$",* I. Panneer Muthuselvam, R. Madhumathy, K. Saranya,, K. Moovendaran, Suheon Lee, Kwang-Yong Choi, Wei-tin Chen, Chin-Wei Wang, Peng-Jen Chen, M. Ponmurugan, Min-nan Ou, Yang-Yuan Chen, Heung-Sik Kim and R. Sankar, Physical Review B **106**, 214417 (2022). *https://doi.org/10.1103/PhysRevB.106.214417*

3. *"Single-walled Ising nanotube with opposite sign of interactions using Wang-Landau algorithm"* A Arul Anne Elden and M Ponmurugan, The European Physical Journal Plus **137** (12), 1305 (2022). *https://doi.org/10.1140/epjp/s13360-022-03539-0*

4. *"Monte Carlo investigation of phase changes and the order of transition of Ising modeled single-walled nanotube"* A Arul Anne Elden and M Ponmurugan, The European Physical Journal Plus **137** (5), 529 (2022). *https://doi.org/10.1140/epjp/s13360-022-02749-w*

5. *"The invariant-based shortcut to adiabaticity for qubit heat engine operates under quantum Otto cycle"* T Kiran and M Ponmurugan, The European Physical Journal Plus **137** (3), 15 (2022). https://doi.org/10.1140/epjp/s13360-022-02592-z

6. *"Optimized Coefficient of performance of Power law dissipative Carnot like Refrigerator"* K Nilavarasi and M Ponmurugan, Physica A: Statistical Mechanics and its Applications 590, 126700 (2022). *https://doi.org/10.1016/j.physa.2021.126700*

7. *"Optimized efficiency at maximum figure of merit and efficient power of power law dissipative Carnot-like heat engines"* K Nilavarasi and M Ponmurugan, Journal of Statistical Mechanics: Theory and Experiment, 043208 (2021). *https://doi.org/10.1088/1742-5468/abf1f1*

8. *"Invariant-based investigation of shortcut to adiabaticity for quantum harmonic oscillators under a time-varying frictional force*" T Kiran and M Ponmurugan, Physical Review A **103**, 042206 (2021). *https://doi.org/10.1103/PhysRevA.103.042206*

9. *"Efficiency at the maximum power of the power law dissipative Carnot-like Heat engines with non-adiabatic dissipation"* M Ponmurugan, Commun. Theor. Phys. **72**, 025601 (2020). *https://doi.org/10.1088/1572-9494/ab6180*

10. *"Heat engine model exhibit super-universal feature and capture the efficiencies of different power plants*" M Ponmurugan, Journal of Statistical Mechanics: Theory and Experiment, 113202 (2019). *https://doi.org/10.1088/1742-5468/ab409e*

11. *"Attainability of maximum work and the reversible efficiency from minimally nonlinear irreversible heat engines"* M Ponmurugan, Journal of Nonequilibrium Thermodynamics **44,** 143 (2019). *https://doi.org/10.1515/jnet-2018-0009*

12. *"Phase transitions in a linear self-interacting polymer on fcc lattice using flat energy interacting growth walk algorithm*"
AAA Jaleel, M Ponmurugan, R Rajesh and SVM Satyanarayana, Journal of Statistical Mechanics: Theory and Experiment 2018 (11), 113301 (2018). *https://doi.org/10.1088/1742-5468/aae854*

13. *"Relations between the efficiency, power and dissipation for the linear irreversible heat engines at maximum trade off figure of merit*" I. Iyyappan and M. Ponmurugan, J. Stat. Mech.: Theory and Exp., P033202 (2018). *https://doi.org/10.1088/1742-5468/aaa8ef*

14. *"General relations between the power, efficiency and dissipation for the irreversible heat engines in the nonlinear response regime*" I. Iyyappan and M. Ponmurugan, Phys. Rev. E **97**, 012141 (2018). *https://doi.org/10.1103/PhysRevE.97.012141*

15. *"Thermoelectric energy converters under trade of figure of merit with broken time reversal symmetry"* I. Iyyappan and M. Ponmurugan, J. Stat. Mech.: Theory and Exp., P093207 (2017). *https://doi.org/10.1088/1742-5468/aa85b8*

16. *"Derivation of Van der Waal's equation of state in microcanonical ensemble formulation"* Aravind P. Babu, Kiran. S. Kumar and M. Ponmurugan, IAPT: Physics Education (India), **33**(3) 3 (2017*). http://www.physedu.in/pub/Jul-Sep-2017/PE17-08-454*

17. *"Van der Waal's gas equation for an adiabatic process and its Carnot engine efficiency"* Kiran. S. Kumar, Aravind P. Babu and M. Ponmurugan, IAPT: Physics Education (India), **33**(3) 4 (2017). *http://www.physedu.in/pub/Jul-Sep-2017/PE15-11-342*

18. *"Tsallis Statistics Generalization of nonequilibrium work relations"* M. Ponmurugan, Phys. Rev. E **93**, 032107 (2016). *https://doi.org/10.1103/PhysRevE.93.032107*

19. *"Microscopic definition of polymer entanglements"* A.E Likhtman and M. Ponmurugan, Macromolecules, **47**, 1470-81 (2014). *https://doi.org/10.1021/ma4022532*

20. *"Studies on structural and average unfolding behaviours of FNIII domain of Contactin-1 Protein by molecular dynamics simulation"* M. Ponmurugan, and S. Vemparala, Frontiers in life Science, **6**, 33-45 (2012). *https://doi.org/10.1080/21553769.2013.776995*

21. *"The 'theta'-point of interacting self avoiding walks and ring on a 2D square lattice,"* M. Ponmurugan, and S.V.M. Satyanarayana, JSTAT: Theory and Exp, P06010 (2012). *https://doi.org/10.1088/1742-5468/2012/06/P06010*

22. *"Transient-state fluctuationlike relations for the driving force on a biomolecule ,"* M. Ponmurugan, and S. Vemparala, Phys. Rev. E (Rapid) **84**, 060101 (2011). *https://doi.org/10.1103/PhysRevE.84.060101*

23. *"flatIGW-An inverse algorithm to compute the density of states of lattice self avoiding walks"* M. Ponmurugan, S. L. Narasimhan, P. S. R. Krishna and K. P. N. Murthy, Physica A**390**, 1258 (2011). *https://doi.org/10.1016/j.physa.2010.11.023*

24. *"Generalized detailed Fluctuation Theorem under nonequilibrium feedback control"* M. Ponmurugan, Phys. Rev. E **82**, 031129 (2010). *https://doi.org/10.1103/PhysRevE.82.031129*

25. *Existence of free energy landscape in linear homopolymers,"* M. Ponmurugan, Euro phys. Lett. **84**, 33001 (2008). *https://doi.org/10.1209/0295-5075/84/33001*
26. *"A flat histogram method for Interacting Self Avoiding Walks,"* M. Ponmurugan, V. Sridhar,

S. L. Narasimhan, and K. P. N. Murthy, Computational Materials Science **44**, 36 (2008). https://doi.org/10.1016/j.commatsci.2008.01.027

27. *"A growth walk model for estimating the canonical partition function of Interacting Self avoiding Walk,"* S. L. Narasimhan, P. S. R. Krishna, M. Ponmurugan, and K. P. N. Murthy, J. Chem. Phys. **128**, 014105 (2008). https://doi.org/10.1063/1.2806935

28. *"Coil-Globule transition of a single short polymer chain- an exact enumeration study,"* M. Ponmurugan, S. L. Narasimhan, P. S. R. Krishna and K. P. N. Murthy, J. Chem. Phys. **126,** 144906 (2007). https://doi.org/10.1063/1.2719195

29. *"Is kinetic growth walk equivalent to Canonical self-avoiding walk? ,"* M. Ponmurugan, S. L. Narasimhan, and K. P. N. Murthy, Physica A**371**, 171 (2006). https://doi.org/10.1016/j.physa.2006.03.058

Research Guidance:

Ph.D Awarded:

Sl. No.	*Name of the Scholar*	*Title of the Thesis*	*Awarded / Thesis submitted*	*University*	*Month and Year*
1	*I. Iyyappan*	*Studies of the general relation between the efficiency, power, dissipation and trade of figure of merit of heat engines in the framework of irreversible thermodynamics*	*Awarded*	*Central University of Tamilnadu (CUTN)*	*15-2-2019*
2	*A Arul Anne Elden*	*Monte Carlo investigation of Ising- modelled single-walled nanotube*	*Thesis submitted*	*Central University of Tamilnadu*	*December 2022*
3	*T. Kiran*	*Investigation of invariant based shortcut to adiabaticity for quantum mechanical systems*	*Thesis submitted*	*Central University of Tamilnadu*	*December 2022*

Ph.D Ongoing:

Sl. No.	*Name of the Scholar*	*Title of the Thesis*	*Awarded / Thesis submitted*	*University*	*Month and Year*
1	*R. Madhumathy*	*Frustrated magnetic system Co-Supervisor: Dr. I. Panneer Muthu Selvam, BHU, India.*	*ongoing*	*Central University of Tamilnadu*	-

M. Phil and PG Project guided:

Sl. No	*Name of the Scholar*	*Title of the Dissertation/Thesis*	*M.Phil. / P.G.*	*University*	*Month and Year*
1	*D. Dheepika*	*Efficiency of Otto engine using Cosmological Chaplygin gas model*	*M.Phil.*	*CUTN*	*March 2021*
2	*G. Murali Krishna*	*Ising like model for Molecular motors*	*PG*	*CUTN*	*May 2015*
3	Santosh Roychowdhury	*Transitional Matrix Approach for Transactional Analysis*	*PG*	*CUTN*	*May 2015*
4	*Aravind. P. Babu*	*Study of Exactly solved model for Maxwell's Demon*	*PG*	*CUTN*	*May 2017*
5	*Kiran. S. Kumar*	*Efficiency Calculation of Molecular motors using Ising like model*	*PG*	*CUTN*	*May 2017*
6	*Ruchi Mishra*	*An overview of Black hole heat engine*	*PG*	*CUTN*	*May 2018*
7	*K. P. Athul*	*Thermodynamics of Blue engine*	*PG*	*CUTN*	*May 2018*
8	*S. R. Nidhin*	*Quantum fluctuation theorem with information feedback*	*PG*	*CUTN*	*May 2019*
9	*G. S. Sangami*	*Heat engines in the irreversible regime*	*PG*	*CUTN*	*May 2019*
10	*Abhijith S. Parackal*	*Importance of Deep learning in phase transition study*	*PG*	*CUTN*	*May 2019*
11	*T. Lekshmi*	*Dark Matter in the local group* Co-Guide: Prof. Somak Raychaudhury. Director The Inter-University Center for Astronomy & Astrophysics	*PG*	*CUTN*	*May 2019*
12	*S. S. Abhyoudai*	*Simulation of Bell-Correlation with one bit of communication*	*PG*	*CUTN*	*May 2020*
13	*K. Ajeeth*	*Interacting growth walk on FCC lattice*	*PG*	*CUTN*	*May 2020*
14	*V. Hema Prasad*	*Atomic Neural network for predicting molecular properties*	*PG*	*CUTN*	*May 2020*
15	*P.G. Deepthi*	*Simulation of non-equilibrium systems on a quantum computer*	*PG*	*CUTN*	*May 2020*
16	*D. Kaviyadharshini*	*Generalization of non-equilibrium work relations by using nonextensive statistical mechanics*	*PG*	*CUTN*	*May 2020*
17	*Malavika Unni*	*Reversible Carnot cycle in*	*PG*	*CUTN*	*May 2020*

		the Black hole regime			
18	*Draupath Umesh*	*Density matrix reconstruction of hyper-entangled quantum states*	*PG*	*CUTN*	*May 2021*
19	*T. M. Muthu Prasath*	*Machine learning phases of 2D Ising model*	*PG*	*CUTN*	*May 2021*
20	K Yadhukrishna	*Experimental Characterization of Autonomous Heat Engine Based on Minimal Dynamic System Model*	*PG*	*CUTN*	*May 2021*

Internship and Project (Outside CUTN):

Sl. No	*Name of the Scholar*	*Title of the Dissertation/Thesis*	*Project/ Internship*	*University/Institution*	*Month and Year*
1	Sruthi Sudhakaran	*Efficiency at The maximum power of different heat engines in the framework of Endoreversible Thermodynamics*	*internship*	*IISER Thiruvananthapuram*	*August 2022*
2	B. Virgin Jenisha	*An Overview of the reversibility of an Adiabatic Process*	*project*	*Loyola College, Chennai*	*May 2011*

Conferences/Seminars/Workshops organized as:

- **Organizer**, *Lectures Series in Physics II (LSP II 2018) , Department of Physics, School of Basic and Applied Sciences, Central University of Tamilnadu, Thiruvarur, Tamilnadu, March 10-14, India 2018.*

- **Treasurer,** *Workshop on Advanced Experimental Techniques (AET2018), Department of Physics, School of Basic and Applied Sciences, Central University of Tamilnadu, Thiruvarur, Tamilnadu, March 15-16, India 2018.*

- **Co-Convener**, *National Conference on Current Trends in Soft Matter (NCCTSM-2015), Department of Physics, School of Basic and Applied Sciences, Central University of Tamilnadu, Thiruvarur, Tamilnadu, March 19-20, India 2015.*

- **Co-Convener,** *Workshop on Advances in Computational Physics (APS 2013), Department of Physics, School of Basic and Applied Sciences, Central University of Tamilnadu, Thiruvarur, Tamilnadu, February 14-16, India 2013.*

- **Co-Convener**, *Lectures Series in Physics, Department of Physics, School of Basic and Applied Sciences, Central University of Tamilnadu, Thiruvarur, Tamilnadu, February 17-18, India 2012.*

Conferences attended (selected):

1. *"Efficiency of a two level quantum heat engine at maximum efficient power", K Nilavarasi and M. Ponmurugan, 7th International Conference on Nanoscience and Nanotechnology (ICONN-2023), SRM University, Kattankulathur, Tamil Nadu, India, 27th – 29th March 2023.*

2. *"Magnetic and thermodynamic studies of J_{eff} = 1/2 alternating chain system $Sr_2Co(SeO_3)_3$", R Madhumathy, I Panneer Muthuselvam and M. Ponmurugan, 7th International Conference on Nanoscience and Nanotechnology (ICONN-2023), SRM University, Kattankulathur, Tamil Nadu, India, 27th – 29th March 2023.*

3. *"Number-operator-based inverse engineering for the shortcut to adiabaticity", T. Kiran and M. Ponmurugan, International conference on advanced physics (IEMPHYS 2022), Department of Basic Science and Humanities, Institute of Engineering & Management, Kolkata (online), India, 22-24 September 2022.*

4. *"Ising modeled single-walled nanotube with alternative interactions using Wang-Landau Algorithm", A Arul Anne Elden and M. Ponmurugan, International Online Conference on Nano Materials, Mahatma Gandhi University, Kerala. (Online), India, 12-14 Aug 2022.*

5. *"Performance of shortcut to adiabaticity enabled quantum Otto engine with a superconducting qubit medium", T. Kiran and M. Ponmurugan, Quantum thermodynamics conference, University of Geneva (online), Switzerland, 4-8 October 2021.*

6. *"Designing using the invariant based inverse engineering for superconducting qubit capacitively coupled to the drive line", T. Kiran and M. Ponmurugan, International conference on scientific developments in the current era (ICSDCE 2021), IB post graduate college, Haryana (online), India, 9-10 April 2021.*

7. *"Quantum Otto cycle analysis of non-adiabatic qubit heat engine with arbitrary Hamiltonian dynamics", T. Kiran and M. Ponmurugan, Middle east international conference on contemporary scientific studies-V, Islamic University of Lebanon, Ankara (online), TURKEY, 27 -28 Mar 2021.*

8. *"Investigation on magnetic response of graphene like Ising system", A Arul Anne Elden and M. Ponmurugan , Middle east international conference on contemporary scientific studies-v Islamic University of Lebanon, Ankara (Online), TURKEY, 27-28 Mar 2021.*

9. *"Investigation of frustration in a Ising tube: A monte Carlo Simulation", A Arul Anne Elden and M. Ponmurugan , International Conference on Nanoscience and Nanotechnology (ICONN), SRM, Chennai (Online), India, 1-3 Feb 2021.*

10. *"Spin Ordering and Phase behavior of Frustrated Body Centred Cubic Ising model: A*

Monte Carlo study", A Arul Anne Elden and M. Ponmurugan, Young Scientist Conference, India International Science Festival (Online), India, 20-24 Dec 2020.

11. *"Computational Statistical Physics", M. Ponmurugan, Virtual Workshop on Collating Physics Resources for Teachers in Higher Education, National Resource Centre for Education, NIEPA, New, India, 18-19 August 2020.*

12. *"Efficiency at maximum power of Minimally Nonlinear Irreversible Thermoelectric Generators under Constant Property Limit (CPL)", K. Nilavarasi and M. Ponmurugan , Present Scenario of Technology and Sciences" (PSTS-2020), Payam Scientific Publishing (online), 8-9 August 2020.*

13. *"Stochastic modelling for Molecular motor Using Wang Landau Algorithm: An Equilibrium Approach", A Arul Anne Elden and M. Ponmurugan , 7th Indian Statistical Physics Community Meeting, ICTS, Bangalore, India, 19-21 Feb 2020.*

14. *": Different adiabatic methods to achieve shortcut to adiabaticity for quantized spin systems", T. Kiran and M. Ponmurugan, , Young Scientist Conference India International Science Festival, Kolkata, India,. 5-8 Nov 2019.*

15. *"Monte Carlo Study of Ising Model on Honeycomb Lattice with Additive Gaussian White Noise", A Arul Anne Elden and M. Ponmurugan , Young Scientist Conference India International Science Festival, Kolkata, India,. 5-8 Nov 2019.*

16. *"Investigation of Ising model on square lattice with the effect of Second nearest neighbour interaction" (Video presentation), A Arul Anne Elden and M. Ponmurugan, BBAVS, NIT, Kurukshetra, India.14-15 Sep 2019.*

17. *"FTIR Spectroscopic studies on human blood sample" " (Video presentation), V. Yesu Raja and M. Ponmurugan, BBAVS, NIT, Kurukshetra, India.21 Dec 2018.*

18. *"Monte Carlo simulation of Ising like system with parity breaking Hamiltonian", A Arul Anne Elden and M. Ponmurugan , 2nd International Conference on Material Science and Technology, Pachamuthu College of Arts and Science for Women, Dharmapuri, Tamil Nadu, India, 27-28 Aug 2018.*

19. *"Jarzynski equality estimation of free energy differences of fast switching bimolecular simulation", M. Ponmurugan, International Conference on computer simulation in natural sciences, (SIMSCI 2018), Presidency College, Chennai, Tamilnadu, India, April 2018.*

20. *"Effect of steering velocities on free energy studies of unfolding of Contactin1 protein" M. Ponmurugan and Satyavani Vemparala, VIIth International Conference on Statistical Physics-Kolkata, STATPHYS-KOLKATA VII, Kolkata, India, November 2010.*

21. *"Mean path identification of entanglements in polymer melts", M. Ponmurugan and A. E. Likhtman, Physical Aspects of Polymer Science, 24th Biennial meeting of the Polymer Physics Group, University of Bristol, Bristol, UK, September 2009.*

22. *A flat histogram method based on Interacting Self Avoiding Walks," M. Ponmurugan, V. Sridhar, S. L. Narasimhan, and K. P. N. Murthy, 4th International Conference on Materials for Advanced Technology, ICMAT2007, Symposium O, Suntec Singapore, Singapore, July 2007.*

23. *"Statistical Mechanics of Interacting Growth Walk," M. Ponmurugan, S. L. Narasimhan, and K. P. N. Murthy, 22nd International Conference on Statistical Physics, STATPHY22, Bangalore, India, July 2004.*