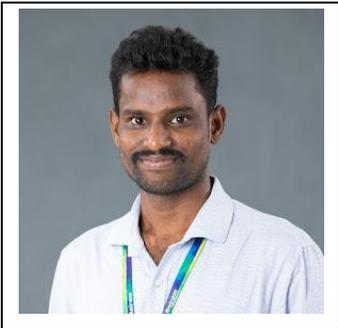


<p>Name: Lt.Dr.E. Viswanathan</p>				
Designation:	Associate Professor			
Qualification:	M.Sc., Ph.D., TNSET,			
Area of specialization:	Computational Materials Science			
Experience:	Industrial Experience	Postdoctoral Experience	Teaching Experience	
	-	-	6 years 4 months	
Number of workshops / FDP attended:	Number of Workshops		Number of FDPs	
	5		8	
Publications:	Conference		Journal	
	National	International	National	International
	1	7	2	15
Books / Book Chapters	2			
Patents:	National		International	
	-		-	
Research Guidance	Completed		Ongoing	
	-		-	
Professional Body Membership	1. IEEE			

Research	Google Scholar ID : FuYJFdwAAAAJ Researcher ID : G-3230-2016 Orcid ID : 0000-0002-0124-4512 Scopus ID : 57190345953 Anna University Guideship : 4170039
Staff Achievements	1. TNSET cleared on 2017 2. Associate NCC Officer - Best Firer Award 2023 3. NPTEL Domain Certified - Electronic Materials 4. Successfully oraganized workshop/ FDP. 5. Successful completion of NITTTR modules & UHV II Course

Educational Qualifications:

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks / Grades obtained	Class obtained
UG	B.Sc.,	Physics	2009	St.Joseph's College, Trichy	Bharathidasan University, Trichy	81.2	First class with Distinction
PG	M.Sc.,	Physics	2012	Bishop Heber College, Trichy	Bharathidasan University, Trichy	89.7	First class with Distinction
Doctorate	Ph. D.	Physics	2022	Sathyabama Inst. Sci & Tech, Chennai	Sathyabama Inst. Sci & Tech, Chennai	Highly Commented	

Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Sri Sairam Engineering College, Chennai	Associate Professor	01-07-2025	Till Date	0	4	17
Sri Sairam Inst. of Tech	Asst. Prof	21-12-2020	31-06-2025	4	6	10
National College	Asst. Prof	10-06-2019	30-11-2020	1	5	20
Total				6	4	16

Workshops/Seminars attended:

1. National Workshop on “Advanced Techniques Related To Analytical, Molecular, Material Testing And Statistical Tools” (NWAT-2018), 27th -29th March 2018, Andhra University.
2. Participated in “INDO-French Workshop on Pressure Effects on Strongly Correlated Materials IWPESCM17”, 9-12, January 2017, Bharathidasan University.
3. Participated in the SERB School on “ Density Functional Theory and Beyond: Computational Materials Science and Materials Design”, 24th November – 13th December 2014, The M.S. University of Baroda.
4. Summer Internship Programme (Summer School & Project), 16th May – 15th July, 2011. IIA
5. “Third Science Conclave-2010 Interaction Programme with Noble Laureates”, 8-14 Dec – 2010, IIT, Allahabad, UP.

FDP/STTP Attended:

Successful NPTEL FDP completion for the following courses

1. Mechanical Behaviour of Materials (Part - I)
2. Physics of Materials
3. Fundamentals of Electronic Device Fabrication
4. Fundamentals Of Electronic Materials And Devices
5. Materials Design for Electronic, Electromechanical and Optical Functions
6. Thin Film Technology
7. Successful completion of NITTTR Modules
8. Successful completion of SIRD training in Rural Development with Panchayat Raj

Papers presented in International / National Conferences:

1. (Oral) Presented in a one-day seminar on “Sensors” entitled “Synthesis and Characterization of Nanoporous Pigment for the Identification of Hazardous Air Pollution,” 28th October 2017. MIT Campus, Anna University.
2. (Oral) Presented at the TEQIP-II Sponsored International Conference on Recent Advancements in Materials (ICRAM-2015) entitled "Study on Structural, Electronic, and Elastic Properties of Boron Arsenide Doped with Nitrogen Using Density Functional Theory," 16-17 October 2015, Trichy Campus, Anna University.
3. (Poster) 59th DAE Solid State Physics Symposium—Presented a paper "Theoretical Investigation on Structural and Electronic Properties of PdO₂" 16-20 December 2014, VIT University, Vellore..

Conference/ Symposium Attended:

1. One day training programme on “Effective Teaching”, 24th January, 2017 IQAC, Sathyabama University.
2. National Seminar on “Quality Higher Education 2017”, 28-29, April 2017, IQAC, Sathyabama University.
3. Advances in Refractory and Reactive Metals and Alloys (ARRMA 2016), 27-29, January 2016 Bhabha Atomic Research Centre
4. Preconference Meet with Nobel Laureate Dr. Walter Kohn (ICRAPID 2014), 5-6, December 2013, Sathyabama University.

Completed/Ongoing Projects:

1. 2017-2019 - Research Associate in DST-FIST sponsored project and Instrument Handling in DST-FIST Lab (TGA, FTIR), Sathyabama Institute of Science and Technology, Chennai.
2. 2013-2016 - Junior Research Fellow in DST-SERB, India funded Project, Sathyabama Institute of Science and Technology, Chennai.

Program Organized:

1. As a co-ordinator organized Two Days Hybridmode FDP on “Advances in Materials Science AMS-2024” on 5-6, Apr, 2024 at Sri Sairam Institute of Technology, Chennai-44.
2. Acted as a tutor in the CSIR Sponsored Winter School on Computational Modelling (WISCOM-2020) during 27-29, Feb, 2020 held at PG & Research Department of Physics, Holy Cross College, Trichy.
3. As a co-convener organized a CSIR sponsored summer workshop on “Modelling and Simulation in Materials Science and Engineering” with hands on session (MSME-2018), during 18-22, June 2018, at the Department of Physics, Sathyabama Institute of Science and Technology, Chennai—119.

Resource Person:

1. Delivered a talk on ‘Development of Quantum Mechanics Towards DFT’ during “Two Weeks Research Internship Program” Organized by Department of Physics, Sri Sairam Institute of Technology, Chennai-44 during the period 26 Dec, 2024 to 7th Jan, 2025.

Journal Publications:

1. Manjula M, Muthumari M, **Viswanathan E**, Thermoelectrics in alkaline earth metal tellurides of ATe₂ type—A first-principles study, Physica Scripta, 2, 100, 025925, 2025.
(<https://doi.org/10.1088/1402-4896/ada591>).
2. Gayathri Chellasamy, Shiva Kumar Arumugasamy, Satheesh Kuppasamy, **Viswanathan Ekambaram**, Kandeegan Rajagopalan, Sada Venkateswarlu, Prabhakaran Deivasigamani, Min Jae Choi, Saravanan

Govindaraju, Kyusik Yun, MXene–MOF architectural hybrid-supported nickel single-atom catalysts for hydrogen evolution reactions, *Journal of Materials Chemistry A*, 12, 2, 1115-1127, 2024, <https://doi.org/10.1039/D3TA06045D>.

3. Manjula M, Krishnaveni S, **Viswanathan E**, Muthumari M, Influence of Rb doping in optical and thermoelectric properties of KCl – A DFT approach, *Materials Today: Proceedings*, 50, 7, 2729-2736, 2022, <https://doi.org/10.1016/j.matpr.2020.08.271>.
4. Priyadharshini S., Sundareswari M., **Viswanathan E**, Jayalakshmi D S, Manjula, M., Band engineering of modified rhombohedral $\text{Cu}_4\text{Mn}_2\text{Te}_4$: ab initio approach, *Philosophical Magazine*, 102, 13, 1261-1289, 2022, <https://doi.org/10.1080/14786435.2021.2023774>.
5. Manjula M, **Viswanathan E**, Muthumari M, Pradheepa K, Dhivyabharathi R, Shalini L, Kuznetsov Denis, Veluswamy Pandiyarasan, Lifting the Optical and Thermoelectric Properties of Mg_2Si as a Function of Sn Incorporation—Potential Thermoelectric Materials, *ECS Journal of Solid State Science and Technology*, 10, 7, 071023, 2021, <https://doi.org/10.1149/2162-8777/ac1479>.
6. Jayalakshmi D S, **Viswanathan E**, Sundareswari M, Hemanand D, Theoretical investigation of thermoelectric property and damage tolerance of LuB_2C_2 compound, *Computational Condensed Matter*, 2021, 28, e00566. <https://doi.org/10.1016/j.cocom.2021.e00566>.
7. Muthumari M, Manjula M, Sundareswari M, **Viswanathan E**, Investigation on half-metallic ferromagnetism in Phosphorous doped SmN-Band structure study, *Journal of Physics: Conference Series*, 1770, 1, 012093, 2021, <https://doi.org/10.1088/1742-6596/1770/1/012093>.
8. Manjula M, Malliga P, **Viswanathan E**, Muthumari M, Ab-initio investigations of electronic, optical, mechanical and thermal properties of $\text{Ca}_{0.875}\text{Ba}_{0.125}\text{Te}$, *Journal of Physics: Conference Series*, 1770, 1, 012094, 2021, <https://doi.org/10.1088/1742-6596/1770/1/012094>.
9. Priyadharshini S, Sundareswari M, **Viswanathan E**, First principles band structure investigation of cubic spinel CuMn_2Te_4 Compound for thermoelectric applications, *Journal of Physics: Conference Series*, 2070, 1, 012037, 2021, <https://doi.org/10.1088/1742-6596/2070/1/012037>.
10. Jayalakshmi D S, Sundareswari M, **Viswanathan E** and Leena Josphine, “Lifshitz transition on SrFe_2As_2 and SrFe_2Bi_2 compounds under pressure”, *Proceedings of the Indian National Science Academy*, 86, 3, 1279-1286, 2020. <https://doi.org/10.16943/ptinsa/2019/49671>.
11. M.Manjula, S.Krishnaveni, **E.Viswanathan**, M.Muthumari, “Influence of Rb doping in optical and thermoelectric properties of KCl – A DFT approach”, *Materials Today Proceedings*, Accepted on 5-10-2020. <https://doi.org/10.1016/j.matpr.2020.08.271>.
12. D. S. Jayalakshmi, M. Sundareswari, **E. Viswanathan**, D. Hemanand and Venkat Pranesh, “Computational study on unconventional superconductivity and mechanical properties of novel antiferromagnetic $(\text{Ca,Sr,Ba})\text{Fe}_2\text{Bi}_2$ compounds”, *International Journal of Modern Physics B*, 33, 28, 1950341, 2019.

<https://doi.org/10.1142/S0217979219503417>.

13. **E.Viswanathan**, M.Sundareswari, S.Krishnaveni, M.Manjula, D.S.Jayalakshmi, "Theoretical Investigation on Effect of Boron on Improving the Hardness of Cubic Zincblende-Aluminium Nitride and Its Mechanical, Thermal and Thermoelectric Properties", *Journal of Superhard Materials*, 41, 5, 321-333, 2019. <https://doi.org/10.3103/S1063457619050046>.
14. D.S.Jayalakshmi, M.Sundareswari, **E.Viswanathan**, "Theoretical Prediction of Possible Coexistence of Superconductivity and Antiferromagnetism in Novel SrFeRuBi₂, SrRu₂Bi₂ and Parent SrFe₂Bi₂ Compounds", *Scientific Bulletin series A*, 81, 2, 221-232, 2019. https://www.scientificbulletin.upb.ro/rev_docs_arhiva/fullcac_116981.pdf.
15. **E.Viswanathan**, M.Sundareswari, D.S.Jayalakshmi, M.Manjula, "Fermi Surface and Hardness Enhancement Study on Ternary Scandium and Vanadium Based Borides by First Principles Investigation", *Computational Materials Science*, 157, 107-120, 2019. (<https://doi.org/10.1016/j.commatsci.2018.10.040>).
16. D.S.Jayalakshmi, M.Sundareswari, **E.Viswanathan**, Abhijeet Das, "Theoretical investigation on thermoelectric properties of (Ca,Sr, Ba)Fe₂(As,Bi)₂ compounds under temperature", *AIP Conference Proceedings*, 1951, 020002-1 – 020002-7, 2018. (<https://doi.org/10.1063/1.5031710>).
17. M.Manjula, M.Sundareswari* and **E.Viswanathan**, "Effect of Zr substitution on the thermal and mechanical properties of Rh₃A (A=Nb,Ta) – A theoretical study", *AIP Conference Proceedings*, 1951, 030015-1 – 030015-7, 2018. (<https://doi.org/10.1063/1.5031741>).
18. M.Manjula, M.Sundareswari and **E.Viswanathan**, "Elastic and Thermodynamic Properties of Zirconium and Hafnium doped Rh₃V Intermetallic Compound- Potential Aerospace Material, *Bulletin of Materials Science*, 41, 19, 2018. (<https://doi.org/10.1007/s12034-017-1537-3>).
19. **E.Viswanathan**, M.Sundareswari, D.S.Jayalakshmi, M.Manjula, S.Krishnaveni, "Structural, electronic, mechanical, thermal and optical properties of B(P,As)_{1-x}N_x; (x=0, 0.25, 0.5, 0.75, 1) alloys and hardness of B(P,As) under compression using DFT calculations, *Indian Journal of Physics*, 91, 9, 999-1011, 2017. (<https://doi.org/10.1007/s12648-017-0996-0>).
20. M.Manjula, M.Sundareswari, **E.Viswanathan**, "Enhancement of ductility in cubic Rh₃A_xTi_{1-x}(A= V, Nb, Ta)(x= 0, 0.125, 0.25, 0.75, 0.875, 1) aerospace materials—First principles DFT study," *Materials Chemistry and Physics (Elsevier)* 1, 9, 1-9, 2016. (<https://doi.org/10.1016/j.matchemphys.2016.06.037>).
21. M. Sundareswari, D. S. Jayalakshmi, and **E. Viswanathan**, A first principles study on newly proposed (Ca/Sr/Ba)Fe₂Bi₂ compounds with their parent compounds, *Philosophical Magazine*, 96, No. 5, pp. 511-523, 2016. (<https://doi.org/10.1080/14786435.2016.1140911>).
22. R. Sugan Harish, D. S. Jayalakshmi, **E. Viswanathan** and M. Sundareswari, Structural stability, electronic, mechanical and thermodynamical properties of CaNi₂P₂ and CaNi₂Sb₂ compounds by band structure

calculations, Modern Physics Letters B, 30, No.12, 1650178, 2016. (<https://doi.org/10.1142/S0217984916501785>).

23. **E.Viswanathan**, M.Sundareswari, Study on structural, electronic and elastic properties of boron arsenide doped with nitrogen using density functional theory, Journal of Chemical and Pharmaceutical Sciences, Spl Iss. 11, 11-14, 2015. ([https://www.jchps.com/specialissues/Special issue 11/jchps 4 E.Viswanathan 11-14.pdf](https://www.jchps.com/specialissues/Special%20issue%2011/jchps%204%20E.Viswanathan%2011-14.pdf)).
24. **E. Viswanathan**, M.Sundareswari, D.S.Jayalakshmi and M.Manjula, Theoretical investigation on structural and electronic properties of PdO₂, AIP Conference Proceedings, 1665, 090047, 2015. (<https://doi.org/10.1063/1.4918027>).
25. S. Krishnaveni, M. Sundareswari and **E. Viswanathan**, Computational study of structural and electronic property of the predicted compound Os₂TiBi, Journal of Chem. and Pharma. Res., 2015, 7(2):378-380. (<http://www.jocpr.com/articles/computational-study-of-structural-and-electronic-property-of-the-predicted-compound-os2tibi.pdf>).
26. M. Manjula, M. Sundareswari, D. S. Jayalakshmi and **E. Viswanathan**, Theoretical investigation on improving the ductility of Rh3V by ternary addition, AIP Conference Proceedings, 1665, 090046, 2015. (<https://doi.org/10.1063/1.4918026>).

Books / Book Chapters:

1. Kumaresan Natesan, M. Praveen Kumar, M. Sasikumar, Francisco Herrera, **E. Viswanathan**, G. Murugadoss, Tatianne Ferreira de Oliveira, Suhail Mubarak, Huiqing Fan, Saeed Farhang Sahlevani, CRC Press, Chapter 8, pp 1.24, 2025, e-ISBN - 9781003531586, (<https://www.taylorfrancis.com/chapters/edit/10.1201/9781003531586-8/>)
2. Jayalakshmi, D.S., Sundareswari, M., **Viswanathan, E.**, Das, Abhijeet Das, Thermoelectric properties of BaFe₂As₂ and Ba₂FeAs₂ Compounds, Scholar's Press, pp 1-56, 2018, ISBN-978-620-2-31424-4. ([https://www.morebooks.de/store/gb/book/thermoelectric-properties-of-bafe₂as₂-and-ba₂feas₂-compounds/isbn/978-620-2-31424-4](https://www.morebooks.de/store/gb/book/thermoelectric-properties-of-bafe2as2-and-ba2feas2-compounds/isbn/978-620-2-31424-4)).

Awards:

1. Received best firer award during the PRCN course for NCC-ANO during 12 Aug - 9 Sep, 2023 at NCC-OTA, Kamptee.

Online Courses:

1. Mechanical Behaviour of Materials (Part - I)
2. Physics of Materials
3. Fundamentals of Electronic Device Fabrication
4. Fundamentals Of Electronic Materials And Devices

5. Materials Design for Electronic, Electromechanical and Optical Functions
6. Thin Film Technology