National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Brief Profile: 1-2 paragraphs (not exceeding 500 words)

Dr.Michael Arock is a Professor presently working in the Department of Computer Applications, National Institute of Technology, Tiruchirappalli. He graduated as a BSc(Mathematics) from GTN Arts College, Dindigul, Madurai Kamaraj University and as an MCA from St.Joseph's College, Bharathidasan University and earned his PhD from NITT under Bharathidasan University. His Doctoral thesis is on Design and Analysis of Parallel Algorithms on CREW PRAM and LARPBS models. His specialization is Parallel Algorithmics. His areas of Interest include Data Structures and Algorithms, High Performance Computing and Bioinformatics. So far, he has produced five doctorates in the field of DNA computing, Natural Language Processing and Bioinformatics. He has published 40 articles in reputed international journals, 19 in the proceedings of International Conferences and 6 in the proceedings of national conferences /seminars He concerns student counseling, motivating for better placements and designing value-based life-style. His hobbies are writing both classical and modern poems in Tamil, writing articles in Tamil and English and reading books, especially on Spiritualism.

1. Name: Dr.Michael Arock

2. Designation: Professor

3. Office Address: Department of Computer Applications

                                                              NIT, Trichy 15

4. Telephone (Direct) (Optional):

    Telephone :   0431-2503736   Extn
    (Optional):

    Mobile (Optional):   9842378952

5. Email (Primary): michael@nitt.edu   Email (Secondary) :michael.arock@gmail.com

6. Field(s) of Specialization:

7.   Employment Profile

S. No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Lecturer	REC, Trichy	06.10.1997	22.04.2007	2200-75-2300-100-

2	Assistant Professor	NIT, Trichy	23.04.2007	22.04.2010	12000-420-18300
3	Associate Professor	NIT, Trichy	23.04.2010	11.03.2018	37400-67000(9000)
4	Professor	NIT, Trichy	12.03.2018	Till date	163900-14751-26224

8. Academic Qualifications (From Highest Degree to High School):

S.No.	Degree	Year	Subject	University/Institution	% of marks
1.	B.Sc.	1993	Mathematics	GTN Arts College, Dindigul Madurai Kamaraj University	93% First Class with Distinction
2.	MCA	1996	-	St.Joseph's College, Bharathidasan University, Trichy	72.76% First Class
3.	Ph.D.	2006	Computer Applications	Bharathidasan University, Trichy	-

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
	Nil		

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
	Nil		

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
	Nil	

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
	Nil			

13. Details of Academic Work
   (i) Curriculum Development   Nil
   (ii) Courses taught at Postgraduate and Undergraduate levels
         a.   Data Structures and their Applications
         b.   Design and Analysis of Algorithms
   (iii)Projects guided at Postgraduate level
         a.   8 projects in MCA every year
         b.   2 projects in Msc(CS) every year
         c.   2 projects in MTech(DA) every year
   (iv)Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
	NIL			

15. Number of PhDs guided/ongoing

Candidate's Name	Area	Admission Date	Completion Date
Ms. B. Smitha Evelin Zorida	DNA Computing	Aug 2006	Aug 2010
Mr. U. Srinivasulu Reddy	Bioinformatics	Aug 2006	Jul 2013
Ms. T. Geetha	Data Mining	Jun 2007	Aug 2011
Ms.S.Sangeetha	Natural Language Processing	Aug 2008	Nov 2013
Mr. M.Anbazhagan	Recommender	Sep 2013	Jan 2021

	Systems		
Ms. Resmi R.P.	Membrane Computing	Sep 2016	Jan 2021
Mr.A.Swaminathan	Image Processing	Aug 2014	Jan 2021
Ms.K.Malathi	Image Processing	Aug 2016	
Ms.Sangeethapriya	Internet of Things	Jan 2018	
Mr.V.Srinivasa Rao	Internet of Things	Aug 2018	

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
			Nil		

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
	Nil			

18. Invited Talks delivered

Topic	Date	Inviting Organization
	Nil	

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Ordinary Member	IEEE	98214756(31 Dec 2021)

20. Academic Foreign Visits

Country	Duration of Visit	Programme
	Nil	

21. Publications

Sl.No.	Authors	Title	Name of the Journal	Vol.	Page	Year
1	RamachandranPillai, Resmi; Arock, Michael;	Spiking neural firefly optimization scheme for the capacitated dynamic vehicle routing problem with time windows	Neural Computing and Applications	33	409-432	2021
2	Mahadevan, Anbazhagan; Arock, Michael;	A class imbalance-aware review rating prediction using hybrid sampling and ensemble learning	Multimedia Tools and Applications	80	6911-6938	2021
3	Ramachandranpillai, Resmi; Arock, Michael;	A solution to dynamic green vehicle routing problems with time windows using spiking neural P systems	The Journal of Supercomputing	77	9689-9720	2021

		with modified rules and learning				
4	RamachandranPillai, Resmi; Arock, Michael;	An adaptive spiking neural P system for solving vehicle routing problems	Arabian Journal for Science and Engineering	45	2513-2529	2020
5	Mahadevan, Anbazhagan; Arock, Michael;	Review rating prediction using combined latent topics and associated sentiments: an empirical review	Service Oriented Computing and Applications	14	19-34	2020
6	RamachandranPillai, Resmi; Arock, Michael;	An N-Puzzle Solver Using Tissue P System with Evolutional Symport/Antiport Rules and Cell Division	Soft Computing for Problem Solving	1048	493-504	2020
7	Mahadevan, Anbazhagan; Arock, Michael;	Integrated topic modeling and sentiment analysis: a review rating prediction approach for recommender systems	Turkish Journal of Electrical Engineering & Computer Sciences	28	107-123	2020
8	Jayapriya, J; Arock, Michael;	Aligning molecular sequences using hybrid bioinspired algorithm in GPU	International Journal of Computational Science and Engineering	21	125-136	2020
9	Annadurai, Swaminathan; Arock, Michael;	Fuel Classification based on Flame Characteristics using a Time Series Analysis with Fuzzy Support Vector Machine Algorithm	Asia-Pacific Journal of Chemical Engineering	15	1-14	2020

10	Reddy, Uyyala Srinivasulu; Arock, Michael; Reddy, AV;	Discovering of gapped motifs using particle swarm optimisation	International Journal of Computational Intelligence in Bioinformatics and Systems Biology	2	1-21	2020
11	Swaminathan, A; Vadivel, A; Arock, Michael;	FERCE: facial expression recognition for combined emotions using FERCE algorithm	IETE Journal of Research		1-15	2020
12	Ramachandranpillai, R; Arock, M;	Spiking neural P ant optimisation: a novel approach for ant colony optimisation	Electronics Letters	56	1320-1322	2020
13	Jayapriya, J; Arock, Michael;	An Improved Hybridized Evolutionary Algorithm Based on Rules for Local Sequence Alignment	Exploring Critical Approaches of Evolutionary Computation		215-237	2019
14	Jayapriya, J; Arock, Michael;	Aligning molecular sequences by wavelet transform using cross correlation similarity metric	Int. J. Intell. Syst. Appl.(IJISA)	9	62-70	2017
15	Jayapriya, J; Arock, Michael;	Aligning two molecular sequences using genetic operators in grey wolf optimiser technique	International Journal of Data Mining and Bioinformatics	15	328-349	2016
16	Jayapriya, J; Arock, Michael;	A novel distance metric for aligning multiple sequences using DNA hybridization process	International Journal of Intelligent Systems and Applications	8	40-47	2016
17	Jayakumar, Jayapriya; Arock, Michael;	Cellular Automata-Based PSO Algorithm for	International Journal of Applied Evolutionary	7	1-15	2016

		Aligning Multiple Molecular Sequences	Computation (IJAEC)			
18	Anbazhagan, M; Arock, Michael;	A Study and Analysis of Collaborative Filtering Algorithms for Recommender Systems	International Journal of Control Theory and Applications	9	127-136	2016
19	Jayapriya, J; Arock, Michael;	ENHANCED BIO-INSPIRED ALGORITHM FOR CONSTRUCTING PHYLOGENETIC TREE.	ICTACT journal on soft computing	6	1061-1069	2015
20	Eswari, Rajagopal; Nickolas, S; Arock, Michael;	A path priority-based task scheduling algorithm for heterogeneous distributed systems	International Journal of Communication Networks and Distributed Systems	12	183-201	2014
21	Sangeetha, S; Arock, Michael;	Event extraction from corefering mentions to enrich semantic web metadata	International Journal of Advanced Intelligence Paradigms	6	95-112	2014
22	Sangeetha, S; Arock, Michael;	Event coreference resolution using particle swarm optimisation	International Journal of Knowledge Engineering and Soft Data Paradigms	4	261-271	2014
23	Zoraida, BSE; Arock, Michael; Ronald, BSM; Ponalagusamy, R;	DNA algorithm employing temperature gradient for Freeze-Tag Problem in swarm robotics	Transactions of the Institute of Measurement and Control	34	278-290	2012
24	Geetha, T; Arock, Michael;	Data clustering using modified k-medoids algorithm	International Journal of Medical Engineering and Informatics	4	109-124	2012
25	Sangeetha, S; Arock, Michael;	Recognising sentence similarity using similitude	International Journal of Advanced Intelligence	4	120-131	2012

		and dissimilarity features	Paradigms			
26	Sangeetha, S; Thakur, Rini Smita; Arock, Michael;	Event detection using trigger chain	International Journal of Knowledge Engineering and Data Mining	2	76-88	2012
27	Sangeetha, Satyan; Arock, Michael;	Event coreference resolution using mincut based graph clustering	International Journal of Computing and Information Sciences		253-260	2012
28	Sangeetha, S; Thakur, RS; Arock, Michael;	Domain Independent Event Extraction System Using Text Meaning Representation Adopted for Semantic Web	International Journal of Computer Information Systems and Industrial Management Applications	2	252-261	2010
29	Arock, Michael;	Distance-Based K-Medoids Clustering for Gene Expression Data.	IUP Journal of Information Technology	6	7-20	2010
30	Zoraida, BSE; Arock, Michael; Ponalagusamy, R;	DNA Algorithm Employing Temperature Gradient for Multiple Traveling Salesperson Problem	International Journal of Computer Applications	975	59-65	2010
31	Zoraida, BSE; Arock, Michael;	An Efficient Algorithm for Constructing DNA Boolean Circuit	International Journal of Computer Applications	1	16-21	2010
32	Zoraida, BSE; Arock, Michael; Ronald, BSM; Ponalagusamy, R;	A DNA-based algorithm for capacitated vehicle routing problem using temperature gradient technique	International Journal of Services, Economics and Management	2	371-384	2010
33	Arock, Michael;	Enhanced hierarchical clustering for gene expression data	International Journal of Computer Applications	1	94-100	2010

34	Reddy, U Srinivasulu; Arock, Michael; Reddy, AV;	Planted (l, d)-motif finding using particle swarm optimization	IJCA Special Issue ECQT	2	51-56	2010
35	Arock, Michael; Reddy, Srinivasulu; Reddy, AV;	A parallel combinatorial algorithm for subtle motifs	International journal of bioinformatics research and applications	6	260-269	2010
36	Arock, Michael; Zoraida, BSE; Ponalagusamy, R;	An efficient algorithm for constructing DNA Boolean circuit	International Journal of Computer Applications	975	14-19	2010
37	Zoraida, BSE; Arock, Michael; Ronald, BSM; Ponalagusamy, R;	A novel generalized design methodology and realization of Boolean operations using DNA	Biosystems	97	146-153	2009
38	Geetha, T; Arock, Michael;	Effective hybrid PSO and K-means clustering algorithm for gene expression data	International Journal of Rapid Manufacturing	1	173-188	2009
39	AROCK, MICHAEL; Ponalagusamy, R;	A constant-time selection algorithm on an LARPBS	Innovative Applications Of Information Technology For The Developing World	20	68-72	2007
40	Arock, Michael; Ponalagusamy, R;	Parallel algorithms for robot path planning with simpler VLSI architecture	International journal of computer applications in technology	26	157-163	2006

1. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
			NIL			

2. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	Fundamentals of Programming with C	Michael Arock	Yes Dee Publisher	2014
2	Event Detection using Lexical Chain	S.Sangeetha and Michael Arock	Springer-Verlag LNAI 6233	2010

3.   Any other Information (maximum 500 words)

- A 5-Day STTP on "Introduction to Algorithms" from 07-11-2017 to 11-11-2017 at NITT.
- Got a one-year MHRD-sponsored project worth 5.00 lakhs on "Developing Suitable Pedagogical Methods For Various Programmes" as P.I and with one Co-P.I.(Dr.S.Sangeetha) and completed on 19-10-2016
- A two-day workshop on "Platforms for Big-data Analytics" on 15th and 16th July, 2016 jointly with Dr. S. Domnic (CA Department) for Engineering college teachers and research scholars.
- A two-day workshop on "Trends in Bioinformatics" on 1st and 2nd February, 2008 jointly with Prof. R.Ponalagusamy (Maths) under TEQIP Community services for Engineering college teachers and research scholars.