

## RESUME

### **SHAJULIN BENEDICT**

**Senior IEEE Member & Brand Ambassador,  
Faculty Incharge (R&D and International Affairs),  
(Guest Professor – TUM-Germany),  
Indian Institute of Information Technology Kottayam (IIIT-K)  
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### EDUCATION :

- **Technische Universitat Muenchen, Germany**, Faculty of Informatics I10, April 2009-March 2011, Post Doctorate.
- **Anna University**, Faculty of Information and Communication Engineering, Jun2004-Oct2008, **Ph.D** in the topic ON SCHEDULING IN GRID COMPUTING.
- **Anna University**, Faculty of Information and Communication Engineering, Jun 2002- May 2004, Master of Engineering.

### AWARDS / ACHIEVEMENTS :

- **MeluXina Early Access Award** -- for title "Deep Learning-Assisted Predictions for Energy Tuning of HPC Applications" from Luxembourg, Europe, 4.5.2021.
- **Best Paper Award** -- ISIC 2021 (Indo-German Conference)
- **Mentor of Change** – AIM (NITI Aayog – Mentor-India program), Govt. of India.
- **Jury-Judge Global** (Entrepreneurial), Platinum Awardee (2021) – Wadhvani Foundation, USA.
- **Best Paper Award** – 5<sup>th</sup> SIRS 2019, Springer ACN Conference, India.
- **University Rank Holder** (Master of Engineering, Anna University-Chennai, 2002-2004 Batch)
- **Rank Holder** (Academic Excellence) in A.K.College of Engineering 2003-2004 Batch
- **Distinction Holder** for Bachelors and Master Programme
- **Three Ph.D candidates Awarded; Five ongoing Ph.D candidates.**
- **Organizing Chair** for IEEE International Conference on Green High Performance Computing (ICGHPC'13 and ICGHPC'16 – DBLP/GoogleScholar/Scopus indexed)
- **Travel Grants Awardee:** ICC2014, Oman (by DST,India), Dagstuhl Seminar, Germany (by GIZ Germany), IndoSys2014, Bangalore (by IndoSys Organizers) , Guest Scientist / Guest Lecturer visits (TUM, Germany); IPDPS 2015 Hyderabad; HiPC 2015 Bangalore.
- **Science Slam Second Prize Winner:** Science Slam - Kolkatta Event - 2014 (Organized by GIZ, DWIH, Germany)

**EXPERIENCE** : Total Years of Experience: **18 years, 09 months**

Sl. No.	Duration	Position	Affiliation	Country
1	25.6.19 to Till Date  11.4.2022	Faculty Incharge (R&D and International Affairs) <b>Permanent Position</b>  Guest Professor	Indian Institute of Information Technology Kottayam, Kerala.  TUM-Germany	India.  Germany
2	Aug. 2017 to 24.6.2019	Adhoc Faculty	Indian Institute of Information Technology Kottayam, Kerala.	India.
3	6 years 4 months	Professor (Promoted on 1.4.2011 as Professor)	St.Xavier's Catholic College of Engineering, Research Centre, Anna University - Chennai, India	India
4	15 Oct 2016 to 15 April 2017. (as LIEN leave from SXCCE)	Guest Professor	Technical University Munich, Germany	Germany
5	1 month (July 2012) 15 days (Oct 2012) 12 days (March 2015) 10 days (March 2016) (During vacation slots from SXCCE)	Visiting Scientist	Technical University Munich	Germany
6	2 years.	PostDoctoral Scientist	Technical University Munich	Germany
7	4 months	Asst.Professor	St.Xaviers Catholic College of Engineering	India
8	4 years 6 months (May 2004 to Nov 2008)	Asst.Professor (during Ph.D studies)	Kalasalingam University, India (Earlier named as <i>Arulmigu Kalasalingam College of Engineering AKCE</i> )	India
9	9 months	R&D Engineer	Power Electronic Industries, Chennai. (Torvin Technologies Pvt.Ltd – Chennai)	India

**MEMBERSHIP** :

- i) Senior Member and Brand Ambassador – IEEE
- ii) ACM Member – Invitee
- iii) Member – EUIndiaGrid
- iv) Member – Indian Society for Technical Education (Life Member).
- v) Member – Alumni Technische Universitat Muenchen, Germany
- vi) Member – International Society of Engineering Association (Computer Society)

**ADMINISTRATIVE TASKS :**

- i) IEEE based ICGHPC Organizer – 2013, 2016 and IEEE-ICITHIT'20 – 2020
- ii) Faculty In-charge -- R&D and International Affairs at IIIT Kottayam (2019 onwards)
- iii) Assistant Warden – Kalasalingam University (2005-2008)
- iv) Project Coordinator - (M.E – C&N, SXCCE-Anna University, 2011 to 2016)
- v) PG Coordinator (M.E – C&N, SXCCE-Anna University, 2011 to 2016)
- vi) Placement Incharge – IIIT Kottayam (2017-2018)
- vii) Assistant Warden – IIIT Kottayam (2017-2018)

**PROJECTS** : **Ongoing/Shortlisted/Recommended Projects**

<b><u>Sl.No.</u></b>	<b><u>Title of the project</u></b>	<b><u>Role</u></b>	<b><u>Funding Agency</u></b>	<b><u>Year of Start</u></b>	<b><u>Amount in Rupees</u></b>
1	IoT Cloud Societal Project	Principal Investigator	NITI-AIM, Govt.of India	April 2019	Rs. 3.56 crores
2	Edge Computing and Analytics	Co-PI	Indo-UK Going Global Partnerships, Exploratory Grants.	Dec. 2021	20000 UK Pounds

**PROJECTS** : **Projects Attracted For Organizations**

<b><u>Sl.No.</u></b>	<b><u>Title of the project</u></b>	<b><u>Role</u></b>	<b><u>Funding Agency</u></b>	<b><u>Year of Start</u></b>	<b><u>Amount in Rupees</u></b>
1	MSME-BI-IIITKOTTAYAM (Incubation Centre)	Principal Investigator	MSME, Govt. of India	April 2021	Rs. 15 lakhs per idea (10 ideas per year)
2	Seed Fund Scheme (Incubation Centre)	Principal Investigator	StartupIndia, Govt. of India.	Dec. 2021	Rs. 2 crores
3	DSIR-SIRO	Principal Investigator	DSIR, Govt. of India	June 2021	Purchase-Related
4	DSIR-SIRO	Principal Investigator	DSIR, Govt. of India	Dec. 2018	Purchase-Related.

**PROJECTS : Completed Projects / Grants**

<b><u>Sl.No.</u></b>	<b><u>Title of the project</u></b>	<b><u>Role</u></b>	<b><u>Funding Agency</u></b>	<b><u>Year of Completion / period</u></b>	<b><u>Amount in Rupees</u></b>
1	Energy Aware Scientific Workflow Compiler for Future Heterogeneous Systems	Principal Investigator	OEAD-DST, India	Ongoing January 2019	Rs. 18,82,740/- (Indian Side: Rs.816250)
2	Exploration of Blockchain technology and development of Secure transactions and Smart Contract Solutions	Consultant (Principal Investigator)	BEL, India	Ongoing Dec. 2018	Rs. 4,16,400/-
3	DST-NIMAT Entrepreneurial Program	Principal Investigator	DST, India	Aug. 2019	Rs. 3,00,000
4	Energy Aware Autotuning for Scientific Applications	Principal Investigator	DST-FWF	April 2017 (3 years)	Rs. 1705680
5	Online-based Energy Consumption Analysis Methodology for Scientific Applications	Principal Investigator	DST – SERB	Feb 2015 (3 years)	Rs. 1512000
6	HPC Cloud Research and Applications – <i>Returning Experts Grant</i>	Principal Investigator	CIM-GIZ Germany	Mar 2012 (1 year)	Rs. 226800
7	HPC Cloud Research and Applications – <i>Returning Experts Grant</i>	Principal Investigator	CIM-GIZ Germany	Mar 2011 (2 years)	Rs. 453600
8	DST-NIMAT Entrepreneurial Program	Principal Investigator	DST-India	Jan. 2019 (6 months)	Rs. 3,00,000
9	Design and Development of Blockchain based Inter-Organization Identity Management System	Principal Investigator	BEL-India	Sep 2020 (15 months)	Rs. 10,00,000/-

**Participated Projects**

- i) ISAR project : Post Doctoral Researcher of ISAR project for the Periscope toolkit development (<http://www.lrr.in.tum.de/~periscop/>) - Germany (2 years)
- ii) Grid Scheduling algorithms at TIFAC Core in Network Engineering, DST funded project.
- iii) Hot Standby Routing Protocol for Catalyst switches in Software Technologies Group of TIFAC Core in Network Engineering

**INVITED TALKS :****2023:**

1. Keynote Speaker on 6th Int. Conf on Intelligent Data Communication Technologies and Internet of Things ICICI 2023 , Topic: Energy-Efficient Edge Intelligence, 6.1.2023.

**2022:**

1. Webinar Speaker on "Edge Intelligence for IoT Applications", invited by IEEE/ACM India Council , on 11.6.2022.
2. Keynote Speaker on 2nd Int. Conf. on Soft Computing for Security Applications, ICSCS 2022, Date: 21.4.2022. Watch here.
3. Keynote Speaker on 2nd Int. Conf. on Smart Data Intelligence, Topic: IoT Edge/Cloud for Smart Cities -- A Manhole Depth Analysis Perspective 11.4.2022.
4. Keynote Talk on Springer ICMCSI 2022: 3rd International Conference on Mobile Computing and Sustainable Informatics (ICMCSI 2022), Title: IoT and Edge Intelligence, 27.01.2022
5. Keynote Talk on ICSCDS 2022: International Conference on Sustainable Computing and Data Communication Systems, 7.4.2022
6. Keynote Talk on IEEE ICICV 2022: 4th International Conference on Intelligent Communication Technologies and Virtual Mobile Networks, 10-11, February 2022.
7. Keynote Talk on (ICISC-2022), 6th Int. Conf. on Inventive Systems and Control, Title: "IoT for Air Quality Monitoring -- Edge, Cloud, Serverless, and Quantum Computing", 6th Jan. 2022.

**2021 -- Completed:**

1. Cheif Guest, 4th International Conference (ICCB-2021), Springer, CARE Technology Institute, Trichy, 9.12.2021, India.
2. Keynote Talk on National Webinar organized by the University of Madras, Chennai, in Oct. 2021, Topic: "IoT for Healthcare Applications".
3. Keynote Talk on AICTE FDP organized by J.C. Bose University, Haryana, on 16.9.2021 at 9:30 AM to 11:30 AM
4. Keynote Talk on IEEE-Madras section sponsored FDP by National Engg. College, Kovilpatti (Autonomous Institution), Topic: "Remote Medical assistance through IoT" on 06/08/2021, at 3.15pm to 4.15pm.
5. Resource Person: AIC-IITKottayam organized workshop on topic "IoT Research and Effective Article Writing on 28.7.2021 from 9:30 AM to 1:00 PM
6. Keynote Talk on AICTE FDP organized by Charusat University, Gujarat, India on "IoT for Air Quality Monitoring in Smart Cities" on 16.6.2021 FN
7. Keynote Talk on STTP organized by PSNA College of Engineering, sponsored by Centre For Faculty Development, Anna University, Chennai - 25, on 31.5.2021, Topic: Serverless IoT For Sensor Applications
8. Keynote Talk on International Conference on Smart Data Intelligence (ICSMDI 2021); Topic: "Serverless Cloud Architecture for DeepIoT Analytics", 29.4.2021
9. Keynote Talk on STTP organized by GEC Barton Hill -- Topic: "Serverless Cloud Deployment for IoT Applications", sponsored event by DTE, Govt.of Kerala, 23.2.2021
10. Keynote Talk -- Topic: "Recent Trends in IoT and Funding Options", Workshop by State Project Felicitation Unit, Kerala; Dr. Usha Titus, I A S, Principal Secretary, Higher Education Department, Government of Kerala, will inaugurate the session, 28.1.2021 (AN).
11. Keynote Talk -- Topic: "IoT-Cloud related Funding Schemes for Entrepreneurs", at COHORT-Impulse 2021, 20.1.2021.
12. AICTE-FDP -- Keynote Talk on Topic: "IoT for Wearable Applications", at SaintGits Engg. College, Kottayam, 13. Jan. 2021.
13. AICTE-FDP -- Keynote Talk on Topic: "IoT - Performance and Monitoring Aspects", Knowledge Institute of Technology, Salem, Tamilnadu, 4.Feb. 2021.

## **2020 - Completed:**

1. IEEE ICOTSEC2020 -- Keynote Talk on "Serverless Blockchain - Pros and Cons" -- Sep 2020.
2. AICTE-FDP -- Keynote Talk on "Monitoring of Machine using IoT" at Amity University -- Oct 2020.
3. IoT Cloud for Trainers of School Students, Webinar Series at Labor India Teachers College of Mahatma Gandhi College, Kottayam, Kerala, India -- Aug 2020.

## **ENTREPRENEURIAL/OUTREACH ACTIVITIES:**

2021:

1. Speaker and Member: Institute Innovation Council, on 9.10.2021.
2. Organizer -- Serve Nation as an Entrepreneur -- iDEX Outreach program of the Ministry of Defense , Chief Guest: i) Gp. Cap. Shri. Pallav Haldekar (IAF), ii) Shri. Dayanand DIO, iii) Shri. Ganesh Kumar (Director-Sales, Tata Elxi), iv) Shri. Kewyn Walter (Author of Digital First), v) Shri. Manoj Nimbalkar (Founder of DareToStart, Germany).
3. Speaker and Member: Strategies for Innovation and Entrepreneurship in Rajiv Gandhi Institute of Technology Kottayam, Institute Innovation Council, on 31.7.2021.
4. Organizer -- 3D Printing -- Redefining Innovation on 18.2.2021
5. Organizer -- ACM/CSI/IEEECS sponsored Symposium on "IoT Cloud for Societal Applications (IoTCloud'21)" on 3 May 2021.

2020 & Others:

1. Organized Indo-European Entrepreneurial Hacks2020 , Nov2020
2. Serving as Director/PI/Representative Officer of AIC-IIITKottayam Foundation
3. Serving as MSME-Business Incubation Incharge of IIIT-Kottayam
4. Policy Ambassador/ NISP Coordinator (IIIT-Kottayam) of AICTE Startup Policy
5. Organized Technological Entrepreneurial Development Program (DST-EDII) - 2019, 2020
6. Jury-Judge of Wadhvani Foundation
7. Mentor of several startup companies
8. Training Organized: IT technologies for business Training program, Total Attendees: 19; 1.10.2019
9. Training Organized: IoT Training Program for Entrepreneurs, Total Attendees: 16 | 5.2.2020
10. Training Organized: Proposal Writing; Total Attendees: 40 | 5.12.2019
11. Outreach activity -- Kiddovate Event; Total School Students: 33 | 15.8.2019
12. Outreach activity -- Kiddovate Event; Total School Students: 85 | 3.3.2020

## **EDITORIAL/REVIEWER/ORGANIZER :**

- Special Issue Editor – Scalable Computing: Practice and Experience – in Sep. 2019
  - **Editors:** *Shajulin Benedict and Michael Gerndt*
  - **Title:** *IoT Cloud Solutions for Societal Applications*
  - **Journal Name:** *SCPE ISSN: 1895-1767*
- Special Issue Editor – Computing Journal (Springer) – in Aug. 2017
  - **Editors:** *Shajulin Benedict, Michael Gerndt, and Seigfried Benkner,*
  - **Title:** *Energy Reduction Techniques for Exa-Scale Computing – Theory and Practice*
  - **Journal Name:** *Computing (Springer) ISSN: 0010-485X (print version)*

- Associate Editor – IEEE ACCESS Journal (IEEE)
- IEEE-ICITIT20 – 2020 – Organizing Chair
- AICTE-FDP on Internet of Things (September 2020 – Scheduled)
- Organizer -- 3D Printing -- Redefining Innovation on 18.2.2021
- Organizer -- ACM/CSI/IEEECS sponsored Symposium on "IoT Cloud for Societal Applications (IoTCloud'21)" on 3 May 2021.
- Organized Indo-European Entrepreneurial Hacks2020 , Nov2020
- Serving as Director/PI/Representative Officer of AIC-IIITKottayam Foundation
- Serving as MSME-Business Incubation Incharge of IIIT-Kottayam
- Policy Ambassador/ NISP Coordinator (IIIT-Kottayam) of AICTE Startup Policy
- Organized Technological Entrepreneurial Development Program (DST-EDII) - 2019, 2020
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- Training Organized: IoT Training Program for Entrepreneurs, Total Attendees: 16 | 5.2.2020
- Training Organized: Proposal Writing; Total Attendees: 40 | 5.12.2019
- Outreach activity -- Kiddovate Event; Total School Students: 33 | 15.8.2019
- Outreach activity -- Kiddovate Event; Total School Students: 85 | 3.3.2020
- IEEE Transactions on Parallel and Distributed Computing - Reviewer
- IEEE Transactions on Systems, Man, and Cybernetics – Part C – Reviewer
- Reviewer - Elsevier - Computers and Industrial Engineering, since 2020
- Reviewer - Elsevier - Journal of Parallel and Distributed Computing, since 2017
- Reviewer - Elsevier - Alexandria Engineering Journal, since 2016
- Reviewer - Elsevier - Sustainable Computing: Informatics and Systems, since 2017
- EuroPAR conference series - Advisory Board Member
- ACM-SigArch ICS2014 – Proceedings Chair
- PARCO 2011 – PC Member -- MTaaS 2015 – PC Member
- IEEE-ICGHPC - 2013 and 2016 – **Organizing Chair (Indexed in DBLP, Scopus)**

### **SUBJECTS TAUGHT:**

<b>Course Title</b>	<b>Level (UG/PG)</b>	<b>Number of Times</b>	<b>Taught for</b>
Computer Organization	UG	1	IIIT-Kottayam
Blockchain Technology	UG	2	IIIT-Kottayam
Parallel and Distributed Computing	UG	2	IIIT-Kottayam
<i>Internet of Things</i>	<i>UG</i> <i>PG</i>	<i>3</i> <i>1</i>	<i>IIIT-Kottayam</i> <i>TUM-Germany</i>
<i>Cloud Computing (Collaboration with TUM-Germany)</i>	<i>UG</i>	<i>6</i>	<i>IIIT-Kottayam</i>
Electric Circuits and Digital Design	UG	2	IIIT-Kottayam

Advanced Computer Networks	UG	1	IIIT-Kottayam
Cloud Computing and Cloud Computing lab	PG	1 (2016 completed) Guest Lectures: 1 (Oct 2017) 1 (Oct 2018) 1 (Oct 2019) 1 (Oct 2020)	Technical University Munich, Germany
Nanotechnology and Applications	PG	1	SXCCE, Anna Univ. Chennai
<i>Cloud Computing</i>	<i>PG</i>	3	<i>SXCCE, Anna Univ. Chennai</i>
Grid Computing	PG	2	SXCCE, Anna Univ. Chennai
Advanced Operating Systems	PG	2	SXCCE, Anna Univ. Chennai
Network Management	PG	2	SXCCE, Anna Univ. Chennai
Real Time Embedded Systems	PG	1	SXCCE, Anna Univ. Chennai
Advanced Computer Architecture	PG	3	AKCE, Anna Univ. Chennai
Computer Networks	UG	3	AKCE, Anna Univ. Chennai
Electromagnetic Field Theory	UG	2	AKCE, Anna Univ. Chennai
Advanced Computer Networks	UG	2	AKCE, Anna Univ. Chennai
Network Routing Algorithms	PG	1	AKCE, Anna Univ. Chennai
Spread Spectrum Communications	PG	2	AKCE, Anna Univ. Chennai

## **SELECTED PUBLICATIONS :**

### **Patents:**

1. Australian Patent - Title: Scalable space structured ledger framework for Industrial Internet of Things using Blockchain technique, Patent No: 2021106931, dated 17.11.2021.
2. Indian Patent (Design) - Title: Automatic Fish Feeder, No: 334476-001 - Journal No: 52/2020 dated 25.12.2020.
3. Indian Patent - Title: Digital Cost Meter for Fused Deposition Modeling (FDM) 3D Printers, No: 202041055550, Journal No: 52/2020 dated 25.12.2020.
4. Indian Patent (Design) - Title: Smart Bin with Rewarding Tracker, No: 333752-001 - Journal No: 46/2020 dated 13.11.2020.



## **Books:**

1. Shajulin Benedict, Big City Bold Ideas , Self-pub, Edition 1, ISBN: 978-93-5408-352-5, pp. 1-94, Jan 2021.

## **SCI Journals:**

1. Shajulin Benedict, Shared Mobility Intelligence using Permissioned Blockchains for Smart Cities, accepted in New Generation and Computing, Springer, 2022.
2. Markus Steinbach, Anshul Jindal, Mohak Chadha, Michael Gerndt, and Shajulin Benedict, TppFaaS: Modeling Serverless Functions Invocations via Temporal Point Processes, accepted in IEEE ACCESS journal, 2022.
3. Shajulin Benedict, Serverless Blockchain Enabled Architecture for IoT Societal Applications, in IEEE Transactions on Computational Social Systems, Vol. 7, No. 5, pp. 1146-1158, doi:10.1109/TCSS.2020.3008995 , 2020.
4. Nishant Saurabh, Shajulin Benedict, Jorge G.Barbosa, Radu Prodan, Expelliarmus: Semantic-Centric Virtual Machine Image Management in IaaS Clouds, in Journal of Parallel and Distributed Computing (Elsevier), Vol. 146, DOI: <https://doi.org/10.1016/j.jpdc.2020.08.001> pp. 107-121, 2020.
5. Ennio Torre, Juan J. Durillo, Vincenzo de Maio, Prateek Agrawal, Shajulin Benedict, Nishant Saurabh, Radu Prodan, A Dynamic Evolutionary Multi-Objective Virtual Machine Placement Heuristic for Cloud Data Centers, in Information and Software Technology, Vol. 128, No. 106390, pp. 1-12, DOI: <https://doi.org/10.1016/j.infsof.2020.106390> Elsevier, Dec. 2020.
6. Shajulin Benedict (2018), Prediction Assisted Runtime Based Energy Tuning Mechanism for HPC Applications, in Sustainable Computing, Informatics and Systems, Elsevier, Vol.19, pp.43-51, <https://doi.org/10.1016/j.suscom.2018.06.004>, 2018.
7. Shajulin Benedict, SCALE-EA: A Scalability Aware Performance Tuning Framework for OpenMP Applications, Scalable Computing: Practice and Experience, Vol. 19, No.1, pp. 15-29, DOI 10.12694/scpe.v19i1.1390, (<https://www.scpe.org/index.php/scpe/article/view/1390/525>) 2018.
8. A Stephen, Shajulin Benedict, RPA Kumar, Monitoring IaaS using various cloud monitors, in Cluster Computing, Vol. 22, No. 5, pp. pp 12459–12471, <https://doi.org/10.1007/s10586-017-1657-y>, Springer, 2019.
9. Rejitha R.S., Shajulin Benedict, Suja A.Alex, and Shany Infanto (2017), 'Energy Prediction of CUDA Application Instances using Dynamic Regression Models', in Computing-Springer, DOI:10.1007/s00607-016-0534-5, pp.1-26, 2017.
10. Matthias Janetschek, Radu Prodan, and Shajulin Benedict (2017), 'A Workflow Runtime Environment for Manycore Parallel Architectures', FGCS, Elsevier, DOI: <http://dx.doi.org/10.1016/j.future.2017.02.029>, Vol. 75, pp. 330-347, 2017.
11. Vincenzo Di Maio, Radu Prodan, Shajulin Benedict, Gabor Kecskemeti (2016), 'Modelling energy consumption of network transfers and virtual machine migration', in FGCS-Elsevier (March 2016), Vol. 56, doi:10.1016/j.future.2015.07.007, pp. 388-406, 2016.

12. Shajulin Benedict and M.Gerndt (2014), 'Scalability and Performance Analysis of OpenMP Codes Using the Periscope Toolkit', in Computing and Informatics, Vol. 33, No. 4, pp. 921 - 942, 2014.
13. Shajulin Benedict (2013), 'Performance Issues and Performance Analysis Tools for HPC Cloud Applications: A Survey', Computing Journal, Vol. 95, No. 2, pp 89-108, DOI 10.1007/s00607-012-0213-0 Springer, 2013.
14. Shajulin Benedict (2012), 'Energy-Aware Performance Analysis Methodologies for HPC Architectures - An Exploratory Study' Vol. 35, No. 6, Journal of Network and Computer Applications, Elsevier, 10.1016/j.jnca.2012.08.003, pages 1709 - 1719, November 2012.
15. Shajulin Benedict, Rejitha R.S. and Vasudevan V., 'An evolutionary and hybrid scheduling algorithm for Computational Grids', Journal of Advanced Computational Intelligence and Intelligent Informatics, Vol. 12, No. 5, pp. 479-484, 2008.

### **Book Chapters:**

1. Shajulin Benedict, Performance Issues and Monitoring Mechanisms for Serverless IoT Applications -- An Exploratory Study, in SCI-2020, Springer-SIST series, Vol.225, DOI:[https://doi.org/10.1007/978-981-16-0878-0\\_17](https://doi.org/10.1007/978-981-16-0878-0_17), pp.165-174, 2021.
2. Shajulin Benedict, Energy Efficient Aspects of Federated Learning -- Mechanisms and Opportunities, in icSoftComp2020, in Soft Computing and its Applications, Springer-CCIS series , DOI: [https://doi.org/10.1007/978-981-16-0708-0\\_4](https://doi.org/10.1007/978-981-16-0708-0_4), 2021.
3. Shajulin Benedict, Prateek Agrawal, Radu Prodan, Energy Consumption Analysis of R-based Machine Learning Algorithms for Pandemic Predictions , in Advanced Informatics for Computing Research, CCIS-Springer, 4th ICAICR 2020, Vol. 1393, [https://doi.org/10.1007/978-981-16-3660-8\\_18](https://doi.org/10.1007/978-981-16-3660-8_18), pp. 192-204, Jun 2021.
4. Shajulin Benedict, Energy-Aware Edge Intelligence for Dynamic Intelligent Transportation System, in 10th IACC 2020, Communications in Computer and Information Science, Vol 1368, pp.132-151, Springer, DOI: [https://doi.org/10.1007/978-981-16-0404-1\\_11](https://doi.org/10.1007/978-981-16-0404-1_11) 2021.
5. Shivendra Singh and Shajulin Benedict, Indian Semi-Acted Facial Expression (iSAFE) Dataset for Human Emotions Recognition, in LNCS Springer Conference, SIRS 2019, India (BEST PAPER AWARD), DOI: [https://doi.org/10.1007/978-981-15-4828-4\\_13](https://doi.org/10.1007/978-981-15-4828-4_13) , Vol.1209, 2020.
6. Shajulin Benedict, Rejitha R.S., and C.Bright, 'Energy Consumption Analysis of HPC Applications using NoSQL Database Feature of EnergyAnalyzer', in Intelligent Cloud Computing, LNCS, Springer, Vol. 8993, DOI:10.1007/978-3-319-19848-4\_7, pp. 103-118, 2015.
7. Shajulin Benedict, Michael Gerndt, and Diana Michaela (2014), 'Formalizing Bottlenecks in Task-Based OpenMP Applications', in Advances in Parallel Computing, IOS press, Vol. 25, doi:10.3233/978-1-61499-381-0-103, pages 103-112, 2014.
8. Shajulin Benedict and M.Gerndt (2012), 'Automatic Performance Analysis of OpenMP codes on a scalable shared memory system using Periscope', in Applied Parallel and Scientific Computing, Vol. 7134, pp. 452-462, LNCS, Springer Publishers, 10.1007/978-3-642-28145-7\_44, 2012.
9. Shajulin Benedict, Matthias Brehm, M.Gerndt, Carla Guillen, Wolfram Hesse and V.Petkovve (2009), 'Automatic Performance Analysis of Large Scale Simulations',

- Lecture Notes in Computer Science (LNCS) series, Vol. 6043, pp. 199-207, 10.1007/978-3-642-14122-5\_24, Springer publications, 2009.
10. Shajulin Benedict, V.Petkovve, M.Gerndt (2009), 'PERISCOPE: An Online-based Distributed Performance Analysis Tool' Book Chapter, Tools for High Performance Computing 2009, Springer Publishers, Dresden, 10.1007/978-3-642-11261-4\_1, pp. 1-16.

### **Refereed Journals:**

1. Shajulin Benedict, Distributed Blockchains for Collaborative Product Designs in Smart Cities, in International Journal of Social Computing and Cyber-Physical Systems, Inderscience, Vol. 2, No. 3, DOI:10.1504/IJSCCPS.2021.117977 , ISSN:2040-0721, pp. 256-274, 2021.
2. Shajulin Benedict, Deepumon Saji, Rajesh P. Sukumaran, Bhagyalakshmi M., Blockchain-Enabled Federated Learning on Kubernetes for Air Quality Prediction Applications, in Journal of Artificial Intelligence and Capsule Networks, Vol.3, No.3, DOI: <https://doi.org/10.36548/jaicn.2021.3.004> , pp. 196-217, 2021.
3. Brintha N.C., Shajulin Benedict, Winowlin Jappes J.T., Resource Allocation in Cloud Manufacturing using Bat Algorithm, in Int. Journal of MTM, Inderscience publishers, Vol. 34, No. 3, pp.296-310, DOI:10.1504/IJMTM.2020.107309, 2020.
4. Shajulin Benedict (2018), Performance Improvement Options of Scientific Applications on XeonPhi KNL Architectures, in Int. Journal of Knowledge, Engineering and Data Mining, Inderscience journals, Vol. 5, No. 1-2, pp.1-16, 2018.
5. NC Brintha and Shajulin Benedict, A survey on cloud-based solutions for cloud manufacturing, in International Journal of Computer Aided Engineering and Technology, Vol. 10, No.1-2, pp.126-140, 2018.
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