Dr. USHARANI CHELLADURAI
Assistant Professor
Department of Computer Science and Engineering
University College of Engineering , BIT Campus
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Google Scholar URL ORCiD ID URL
HomepageURL   Elsevier Scopus Web of Science

Complete Profile:

I am an Assistant Professor in the Department of Computer Science and Engineering (CSE) at Anna University, India. I defended my Ph.D. thesis Titled "A Blockchain based Patient Centric E-Health System Ensuring Security and Privacy with Modified Merkle Tree" in 2022 from the Faculty of Information and Communication Engineering, Anna University, Chennai, India.

Area of Specialization: Blockchain Technology

Research Interest: Block Chain Technology, Advanced Cryptography, Cloud Computing, Security in Distributed Systems, Machine Learning, Deep Learning and Generative AI.

Research Areas:

Authentication and Key Management
Cryptographic Protocols
Privacy-Enhancing Technologies
Security in Networks and Distributed Systems

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Education:

PhD – Information and Communication Engineering
Anna University, India.   2022

M.E – Software Engineering   2010
Anna University , India.

B.Tech – Information Technology   2006
Anna University, India.
College of Engineering Guindy (CEG)

Experience:

Assistant Professor   7/8/2014 – Present
Computer Science and Engineering
University College of Engineering, BIT Campus
Anna University, India.

Assistant Professor   3/2011 – 6/8/2014
Computer Science and Engineering
University College of Engineering
Tirukkuvalai, Nagapattinam
Anna University, India.

Visiting Faculty   8/2010-2/2011
Computer Science and Engineering
University College of Engineering
Tirukkuvalai, Nagapattinam
Anna University, India.

Publications:	International Journals	:	**3**
	International Conferences	:	**4**
	National Conferences	:	**5**
	Book Chapters	:	**3**

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International Journals:

Usharani Chelladurai, Seethelakshmi Pandian & Krishnamoorthy Ramasamy 2021, 'A Blockchain based Patient Centric EHR Storage and Integrity Management for e-Health Systems', Health Policy and Technology, Elsevier, England, vol. 10, no. 4, DOI: 10.1016/j.hlpt.2021.100513, **Impact Factor – 1.196.**

Usharani Chelladurai & Seethelakshmi Pandian, 2021, 'HARE - A new Hash based Authenticated Reliable and Efficient Modified Merkle Tree Data Structure to Ensure Integrity of Data in the HealthCare Systems', Journal of Ambient Intelligence and Humanized Computing, Springer, Germany, pp. 1-27, **Impact Factor–4.594.**

Usharani Chelladurai & Seethelakshmi Pandian, 2021, 'A novel Blockchain based Electronic Health Record Automation System for Healthcare', Journal of Ambient Intelligence and Humanized Computing, Springer, Germany, vol. 13, no, 1, pp. 693-703, **Impact Factor – 4.594.**

Book Chapters:

Usharani Chelladurai & Seethalakshmi Pandian, 2021, "A novel Blockchain based Access Control Manager to Electronic Health Records(EHRs)", Book Chapter in Blockchain for Smart Cities", Elsevier, DOI: https://doi.org/10.1016/B978-0-12-824446-3.00003-X

Usharani Chelladurai & Seethalakshmi Pandian, 2020, "Machine Learning based Early Prediction of Disease with Risk Factors Data of the Patient using Support Vector Machines", Book Chapter in Lecture Notes in Electrical Engineering, Vol 249, Springer. DOI: 10.1007/978-981-16-0289-4_38

Usharani Chelladurai & Seethalakshmi Pandian. 2019, "A Blockchain based Integrated Digital Health Record - A new Model For Health Information Exchanges", Book Chapter in Blockchain Technology Fundamentals, Applications and Case Studies, Taylor and Francis, DOI: https://doi.org/10.1201/9781003004998

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International Conferences:

Usharani Chelladurai, 2023, "Privacy-Driven Health Information Exchange: A Hybrid Encryption Technique for Permissioned Blockchain based E-health Systems", First International Conference on Communication Systems (ICOCS-2023), held at NIT Puducherry, India. Springer Book Series: Lecture notes on Electrical Engineering.

Usharani Chelladurai & Seethelakshmi Pandian, 2018, 'Smart Health Care System', MHRD and DST Sponsored India International Science Festival - Young Scientist Conference (IISF-YSC-2018), Lucknow, India.

Usharani Chelladurai & Seethelakshmi Pandian, 2018, 'A novel Scheduling mechanism to support Healthcare Analytics using Blockchain Technology', 6th International Conference on Business Analytics and Intelligence (ICBAI-2018), held at Indian Institute of Science- IISc Bangalore, India.(ISBN 978-93-86768-21-6).

Usharani Chelladurai, 2010, Course Planning of Higher Education to Meet Market Demand by using Data Mining Techniques", International Conference on Advanced Computing and Communication at Amal Jyothi College of Engineering, Kerala, India from 03-052010 to 04-05-2010.

National Conferences:

Usharani Chelladurai, 2024, "Blockchain based Content Similarity Detection and Deduplication System for Enhancing the Storage Efficiency", Fourth National Conference on Recent Advancements in Science, Engineering and Technology (RASET - 2024) held at Bannari Amman Institute of Technology, Erode, India.

Usharani Chelladurai & Seethelakshmi Pandian, 2019, 'Blockchain Technology - A new model for Health Information Exchanges, DST Sponsored National Conference on Blockchain Smart Contract Technologies, (BSCT-2019), held at National Institute of Technology-NIT Trichy, India.

Usharani & Balamurugan, 2016, "5g Technologies", National conference NCRIIT, UCE BIT Campus, Tiruchirappalli, India.

Usharani, Deepika & Janaki, 2016, "Enhance the System performance and Reduce Energy Consumption by Dynamic Distributed Task Management" national conference NCRIIT,. UCE , BIT campus , Tiruchirappalli, India.

Usharani & Praveenkumar, 2016,"Efficient Resource Provisioning for Online Gaming Applications in Cloud Computing Environment", International Journal of Advanced Research in Computer and Communication Engineering (IJARCCE).

Projects Guided

Master of Engineering (M.E):   **10**

Bachelor of Engineering (B.E & B.Tech):   **45**

Courses Taught

Bachelor of Engineering (B.E) Subjects:

- CS3491 - AI & ML
- CCS339 – Crypto Currencies and Blockchain Technologies
- CCS343 - Digital Mobile Forensics
- CCS334 – Big Data Analytics
- CS3551 – Distributed Computing
- IT8073 - Information Security
- CS8091 – Big Data Analytics
- CS8074 - Cyber forensics
- CS6601 - Distributed Systems
- CS6703 - Grid and Cloud Computing
- CS5861 -Cryptography and Network Security
- CS2032 - Data Warehousing and Mining
- CS6501 - Internet Programming
- GE3171- Python Programming
- CS2331 - Object Oriented Programming

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Master of Engineering (M.E) Subjects:

- Machine Learning Techniques
- Cloud Computing Technologies
- Multi Core Architecture
- Mobile and Pervasive Computing
- Software Engineering
- Software Project Management
- Software Design Patterns

Additional Responsibilities:

Academic

- UG – Class Coordinator CSE B Sec (2022-2026)
- UG – Class Coordinator IT B Sec (2016 – 2020)
- PG – Class Coordinator (2015-2017)
- UG Level - Mini Project Coordinator
- UG & PG Student's Project Reviewer cum Evaluator
- Cultural Coordinator – CSE Department
- Sports Coordinator – CSE Department

Awards:

- Honorary Prize for cent percentage results University Level.
- IISF India International Science Festival 2018 – Young Scientist Conference – Poster Presentation -Third Prize winner.
- Periyar Memorial Cash Award - Diploma Level.

Reviewer in Journals:

- Elsevier – Computers in Biology and Medicine
- Taylor & Francis – Cogent Engineering
- Turkish Journal - Electrical Engineering and Computer Sciences
- IJPHS - International Journal of Public Health Science
- Taylor & Francis – Connection Science
- MDPI – Healthcare
- Springer – AIHC
- Journal of Big Data
- MDPI – Electronics and Sensors

Guest Editor:

SAGE – INQUIRY –The Journal of Healthcare Organization, Provision and Financing.

Editorial Member - Journal of Quality in Healthcare and Economics (JQHE).

Professional Activities:

- Expert Lecture on "AI & ML"
- Expert Lecture on "Block Chain Technology"
- Expert Lecture on "Cloud Computing
- Conducted 14 - days FDP
- Conducted National Level Workshop
- Conducted Professional Training Programme : **.Net Programming**

Membership of Scientific and Professional Societies:

- IAENG – International Association of Engineers
- IACSIT – International Association of Computer Science and Information Technology.

Program Conducted

SUMMER SCHOOL / WORKSHOP CONDUCTED:

National Conference:
AICTE, TEQIP –II Sponsored 2 Days National Level Conference on Recent Innovations in Information Technology from 17-08-2016 to 18-08-2016, Organized by Department of Computer Science and Engineering, UCE, BIT Campus, Anna University, Tiruchirappalli, India.

Faculty Development Program:

AICTE, TEQIP –II Sponsored 14 Days FDP on "Hands on Cloud & Big Data Analytics" From 12-05-2015 to 25-05-2015 at Organized by Department of Computer Science and Engineering, UCE, BIT Campus, Anna University, Tiruchirappalli, India.

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Seminar:

National Level Seminar on 'Cloud Computing a Hands on Approach' From 15-09-2016 to 16-09-2016 2-days Organized by Department of Computer Science and Engineering, UCE, BIT Campus, Anna University, Tiruchirappalli, India.

Short Term Course:

AICTE, TEQIP –II Sponsored 5 Days training Course on 'FSIPD -Foundation Skills in Integrated Product Development' From19-01-2016 to 23-01-2016, Organized by Anna University, Chennai, India.

Induction / Orientation:

A 4 – Week Faculty Induction and Orientation Program for Faculties in Universities and Higher Education was conducted by Teaching Learning Centre, Ramanujan College, University of Delhi In collaboration with ARMY INSTITUTE OF EDUCATION (AIE) under the aegis of MINISTRY OF EDUCATION from 23 May – 21 June 2023 obtained Grade A+.

AICTE NITTT conducted 8 Module Course (Completed all modules) on Feb 2024.

Work Shops:

One day Workshop on 15-09-2017, 'Innovation and Communication Skills' organized by Shri Dewang Mehta Foundation Trust and NASSCOM in association with Anna University, Chennai, India.

Two Days National Level Workshop on 'Mobile Application Development' from 17-02-2016 to 18-02-2016, Organized by BIT Campus, Anna University, Tiruchirappalli, India.

Two Days workshop on 'Awareness on Research and Employable Opportunities in Recent Technology, from 06-10-2017 To 07-10-2017, Organized by UCE, BIT Campus, Anna University, Tiruchirappalli, India.

Two Days Hands on Workshop on Python Programming, from 28-08-2017 to 29-08-2017, Organized by Centre for Academic Courses, Anna University, Chennai, India.

Faculty Development Programme [FDP]:

1) A 5 –Days online FDP on Universal Human Values (UHV), from 31/01/2022 to 04/02/2022 Organized by AICTE, India.

2) AICTE and ISTE Sponsored 6 Days Online FDP on Cryptography in Quantum Era, from 24/12/2021 to 31/12/2021, Organized by Anna University, Kancheepuram, India.

3) Two Week Online FDP on ICT Tools for Teaching Learning Process and Institute', from 10/08/2020 to 21/10/2020, Organized by IIITDM Jabalpur, India in Association With UCE BIT Campus, Anna University, Tiruchirappalli, India.

4) Global Online Two Week FDP on Advanced Optimization Techniques and Hands On With MATLAB and SCILAB' from 13/07/2020 to 24/07/2020, Organized by IIITDM Jabalpur, India in Association With UCE BIT Campus, Anna University, Tiruchirappalli, India.

5) Two Week Industrial Training Program On Communications And Network Technologies from 08/06/2020 To 26/06/2020, Conducted By RGMTTC, BSNL-Chennai, India.

6) A 5 Days FDP On Natural Language Processing From 6/1/2020 To 10/1/2020 Organized by IIITDM Jabalpur, India in Association With UCE BIT Campus, Anna University, Tiruchirappalli.

7) AICTE Sponsored 14 Days FDP On "Compiler Design" from 3-12-2018 To 15-12-2018. Organised by Department Of Computer Science And Engineering, UCE, BIT Campus, Anna University, Tiruchirappalli, India.

8) AICTE Sponsored 14 Days FDP On Advances in Research And Development Of Intelligent Mobile Robots, from 20-11-2017 To 03-12-2017. Organized by

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Department Of Mechanical Engineering, EGSP Engineering College, Nagapattinam, India.

9) AICTE, TEQIP -II Sponsored 14 Days FDP On Top Tech Trends - Driving the Future Of Information Technology (DFIT), from 30-06-2016 To 13-07-2016, Organized By Department Of Computer Science and Engineering, UCE, BIT Campus, Anna University, Tiruchirappalli, India.

10) Anna University Chennai Sponsored 7 Days FDTP On Grid and Cloud Computing, from 06-06-2016 To 12-06-2016. Organized by Department Of CSE, UCE Anna University, Nagapattinam, India.

11) Anna University Sponsored 7 Days FDTP On Electronic Devices, from13-12-2014 To 19-12-2014,Organized By Department Of ECE, EGSP Engineering College Nagapattinam, India.

12) Anna University Sponsored 7 –Days FDTP On Data Warehousing and Data Mining, from 02-12-201308 To 12-2013 Organized By Department Of CSE, EGSP Engineering College Nagapattinam, India .

13) AICTE, TEQIP-II Sponsored 5 Days FDP On Wireless Sensor Networks and Its Applications, from 12-05-2014 To 16-05-2014, Organized By Department Of EEE, National Institute Of Technology Trichy, NIT Trichy India.

Most of my publications are also listed on Google Scholar.

I have author profiles on Elsevier Scopus, Springer, Web of Science and on ORCiD

I hereby declare that the above information is true.

Thank you

Sincerely

Usharani Chelladurai