

Name Dr. TERENCE K. JOHNSON
Ph.D. (Information Technology)

Designation Associate Professor & HOD

Department M.C.A.

Date of Joining the Institute 09/05/2018

Education B.E (EXTC), SIGCOE, Mumbai University, 2002
M.E.(Information Technology), PCCE, Goa University, 2006
Ph.D. (Information Technology), AMET University, 2017

Branch / Specialization Information Technology

Areas of Interest Data Mining, Signal and Image Processing, Data Structures and Analysis of Algorithms

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Academic Appointments

Name of the University / Institute / Industry	Duration	Designation
Finolex Academy of Management and Technology, Ratnagiri	From 09/05/2018 to till date	Associate Professor
Agnel Institute of Technology and Design, Assagao, Goa	From 25/06/2012 to 08/05/2018	Assistant Professor – Senior Scale
Padre Conceicao College of Engineering, Verna, Goa	From 01/09/2006 to 24/06/2012	Assistant Professor
Padre Conceicao College of Engineering, Verna, Goa	From 17/07/2006 to 31/08/2006	Lecturer

Total Professional Experience – 13 Years & 9 Months

Students projects Guided at Master of Engineering (M.E.)

1. Classifying Bird Species based on their Sound – (Data Mining)
2. Research on Data Compression - (Data Compression)
3. Interpretation of Frequent Patterns using Semantic Annotations - (Data Mining)
4. Association Rule Generation using Ontology - (Data Mining)
5. Image Compression using Wavelet Transform - (Image Processing)
6. Super Resolution Image Construction - (Image Processing)
7. Automated Library System - (DBMS)
8. Image Recognition using wavelets and Invariant moments - (Image Processing)

Students projects Guided at Bachelor of Engineering (B.E.)

1. OLAP Server for Goa Institute of Management - (Data Mining and Warehousing)
2. Steganography - (Information Security)
3. STEG – O – AUDIO - (Information Security)
4. Efficient Image Compression using Kekre's Transforms - (Image Processing)
5. Kekre's Transform based Steganography on Partitions formed by Fuzzy C Strange Points Clustering Algorithm - (Image Processing, Information Security and Data Mining)
6. Bisecting Min Max DBSCAN Algorithm – (Data Mining)
7. A Novel Approach to Clustering using BAT Inspired Algorithm (Data Mining)
8. Biometric Authentication using Keystroke Dynamics - (Information Security)
9. Security Alarm System for Domotics through GSM SMS - (Systems Security)
10. Number Plate Recognition System (Image Processing)
11. Improved Steganography using Enhanced K Strange Points Clustering Algorithm - (Image Processing, Information Security and Data Mining)
12. Heart Disease detection using Clustering and Classification Algorithms - (Data Mining)
13. Glaucoma Detection using Enhanced K Strange Points Clustering Algorithm and Classification - (Image Processing and Data Mining)
14. Document Clustering using Divisive Hierarchical Bisecting Min Max Clustering Algorithm - (Data Mining)

Technical Seminars/ Workshop/ Lecture/ Invited Talks As a Resource Person

1. Delivered a Technical Session as Resource faculty for ISTE STTP on "**Robotics using Embedded C**" organized by Dept. of Computer Engineering, Agnel Institute of Technology and Design, Assagao - Goa on 05th November 2015.
2. Delivered a Technical Session as Resource faculty for ISTE STTP on "**Image Processing**" organized by Dept. of Electronics and Telecommunications Engineering, Don Bosco College of Engineering, Fatorda - Goa on 11th July 2014.
3. Delivered a Technical Session as Resource faculty for ISTE STTP on "**Fuzzy Logic and its Applications**" organized by Dept. of Computer Engineering, Don Bosco College of Engineering, Fatorda - Goa on 07th January 2014.
4. Delivered a Technical Session as Resource faculty for workshop on "**Foundation Course in C#**" organized by Dept. of Computer Engineering, Agnel Institute of Technology and Design, Assagao - Goa on 30th and 31st August 2013.
5. Delivered a Technical Session as Resource faculty on "**Wavelet Transforms**" for ISTE Programme on "Recent Trends in Digital Filters Design and its Applications", December 2007 conducted at Agnel Polytechnic, Verna -Goa, by the Department of Electronics and Communications which was attended by Technical Teachers from Engineering Colleges, Polytechnics and Industry.
6. Delivered Technical Sessions as Resource faculty for ISTE STTP workshop on "**Digital Image Processing: Issues, Challenges and Research Avenues**" jointly organized by Dept. of Electronics and Telecommunications Engineering and Dept. of Electronics Engineering, Hope Foundation's Finoex Academy of Management and Technology, Ratnagiri - Maharashtra from 04th to 08th June 2018.

Papers Published - 28

Papers Presented/Published in National / International Journals

International Journals – 13

1. Paper titled "**The Bisecting Min Max DBSCAN Algorithm**" published in IOSR Journal of Computer Engineering (IOSR-JCE), e-ISSN: 2278-0661, p-ISSN: 2278-8727, Volume 20, Issue 3, Ver. I (May. - June. 2018), pp 78-82
2. Paper titled "**Enhanced K Strange Points Clustering Using Bat Inspired Algorithm**" published in International Journal of Computer Science Engineering and Information Technology Research (IJCSEITR), ISSN (P): 2249-6831; ISSN (E): 2249-7943, Vol. 8, Issue 2, Jun 2018, pp 77-82, © TJPRC Pvt. Ltd.
3. Paper titled "**Document Clustering Using Divisive Hierarchical Bisecting Min Max Clustering Algorithm**" published in IOSR Journal of Computer Engineering (IOSR-JCE), e-ISSN: 2278-0661, p-ISSN: 2278-8727, Volume 19, Issue 3, Ver. VI (May - June 2017), pp 66-70.
4. Paper titled "**Efficient Image Compression using Kekre's Transforms**" published in International Journal of Computer Science Engineering and Information Technology

Research (IJCSEITR), ISSN(P): 2249-6831, ISSN(E): 2249-7943, Vol 6, Issue 4, Aug 2016, pp 33-44, © TJPRC.

5. Paper titled "**Heart Disease Detection using EKSTRAP clustering with Statistical and Distance based Classifiers**" published in IOSR Journal of Computer Engineering (IOSR-JCE), e-ISSN: 2278-0661, p-ISSN: 2278-8727, Volume 18, Issue 3, Ver. IV (May-Jun. 2016), pp 87-91.
6. Paper titled "**Improved Steganography using Enhanced K Strange Points Clustering Algorithm**" published in International Journal of Applied Engineering Research ISSN 0973-4562 Volume 11, Number 9 (2016) pp 6881-6885 © Research India Publications.
7. Paper titled "**Quantitative Performance Analysis for the Family of Enhanced Strange Points Clustering Algorithms**" published in International Journal of Applied Engineering Research ISSN 0973-4562 Volume 11, Number 9 (2016) pp 6872-6880 © Research India Publications.
8. Paper titled "**CODED EKSTRAP Clustering Algorithm**" published in International Journal of Applied Engineering Research ISSN 0973-4562 Volume 10, Number 18 (2015) pp 38880-38884, © Research India Publications.
9. Paper titled "**The Regress Averaging Clustering Algorithm**" published in International Journal of Engineering & Technology, IJET-IJENS Vol:15 No:05. Pp 46-51, 155105-8484-IJET-IJENS © October 2015 IJENS.
10. Paper titled "**Bisecting Collinear Clustering Algorithm**" published in International Journal of Computer Science Engineering and Information Technology Research, (IJCSEITR), Dec 2013, pp 43-46, ISSN(Online):2249-6831, ISSN(Print):2249-7943
11. Paper titled "**Clustering of Collinear data points in lower dimensions**" published in IOSR Journal of Computer Engineering (IOSRJCE) ISSN: 2278-0661, ISBN: 2278-8727 Volume 6, Issue 5 (Nov-Dec. 2012) pp 08-11
12. Paper titled "**K-Means Clustering Algorithm in Higher Dimensions**" published in International Journal of Computer Science and Applications IIIrd Issue Bearing ISSN No. 0974-0767
13. Paper titled "**Solution of differential equations using Exponential of a Matrix**" published in IOSR Journal of Mathematics (IOSRJM) ISSN: 2278-5728, Volume 5, Issue 3 (Jan-Feb 2013) pp 12-17

Papers Presented/Published in National/ International Conferences

International Conferences – 12

1. Paper presented titled "**Steganography using FCS points clustering and Kekre's Transform**" – Accepted for publication in Springer Advances in Intelligent Systems and Computing (AISC) Series, indexed by: ISI Proceedings, DBLP. Ulrich's, EI-Compendex, SCOPUS, Zentralblatt Math, MetaPress, Springerlink. (in press).
2. Paper presented titled "**The Redesigned Fuzzy C Strange Points Clustering Algorithm**" – 2016 2nd International Conference on Contemporary Computing and

Informatics (IC3I), Greater Noida, India, 2016, IEEE Xplore, pp. 789-793. doi: 10.1109/IC3I.2016.7918790.

3. Paper presented titled "**Divisive Hierarchical Bisecting Min Max Clustering Algorithm**" - Advances in Intelligent Systems and Computing, Series Volume - 468, Series ISSN 2194-5357, Online ISBN 978-981-10-1675-2, DOI 10.1007/978-981-10-1675-2_57, 2016 International Conference on Data Engineering and Communication Technology-ICDECT 2016, March 10 -11, LAVASA, Pune, Springer Singapore, copyright 2017, copyright holder Springer Science + Business Media Singapore, pp 579-592.
4. Paper presented titled "**Fuzzy C Strange Points Clustering Algorithm**" - IEEE International Conference on Information Communication & Embedded Systems" ICICES 2016", February 25 -26, 2016 S. A. Engg. College, Chennai, India. E-ISBN:978-1-5090-2552-7, PoD ISBN: 978-1-5090-2553-4, INSPEC Accession Number: 161596528, DOI: 10.1109/ICICES.2016.751829, IEEE, pp 1-5.
5. Paper presented titled "**Genetic Algorithms based Enhanced K Strange Points Clustering Algorithm**", published in 2015 International Conference on Computing and Network Communications (CoCoNet), Dec 16-19, 2015, Trivandrum, India, Print ISBN 978-1-4673-7209-1, INSPEC Accession Number 15801459, DOI 10.1109 / CoCoNet.2015.7411272 / IEEE, pp 743-747.
6. Paper presented titled "**Enhanced K Strange Points Clustering Algorithm**", published in Proceedings of the '2nd International Research Conference on Emerging Information Technology and Engineering Solutions' EITES 2015, 978-1-4799-1838-6/15, IEEE Computer Society Washington, DC, USA © 2015 IEEE, DOI 10.1109/EITES.2015.14, indexed in ACM Digital Library, pp 32-37.
7. Paper presented titled "**K-Strange Points Clustering Algorithm**", published in the Proceedings Computational Intelligence in Data Mining - Volume I, Print ISBN 978-81-322-2204-0, Online ISBN 978-81-322-2205-7, pp 415-425 and Smart Innovation, Systems and Technologies - Volume 31 2015, Springer Series.
8. Paper presented titled "**Improved Collinear Clustering Algorithm in Lower Dimensions**", published in Proceedings of 'Second International Conference on Emerging Research in Computing, Information, Communication and Applications', ERCICA 2014, organized by NMIT, Bangalore on August 1 - 2, 2014 and published in Elsevier Publications and its digital library, ISBN 9789351072638, Vol 3, pp 343-348.
9. Paper presented titled "**Conceptual Mapping of Risk Management to Data Mining**", published in 2010 3rd International Conference on Emerging Trends in Engineering & Technology (ICETET) organized by GHR Labs & Research Center, G.H.Raisoni College of Engineering, Nagpur, India on November 19-21, 2010 at BITS-Pilani Goa campus, Goa, India, Print ISBN: 978-1-4244-8481-2, CD-ROM ISBN: 978-0-7695-4246-1, Electronic ISSN: 2157-0485, Print ISSN: 2157-0477, CD-ROM ISSN: 2157-0477, INSPEC Accession Number: 11832826, DOI: 10.1109/ICETET.2010.98, Publisher: IEEE, also available in ACM Digital Library.
10. Paper presented titled "**Bisecting J-Strangers Clustering Algorithm**", published in International Conference on Advance Computing and Creating Entrepreneurs (ICOACCE - 2010) organized by Gitanjali Institute of Technical Studies on 12th & 13th February 2010 at Udaipur, Rajasthan, India.
11. Paper presented titled "**K-Means Clustering For High Dimensional Data Based On Genetic Algorithms Approach**", published in International Conference on ' Emerging Trends in Computer Science, Communication & Information Technology ' (CSCIT2010),

organized by the Department of Computer Science & Information Technology, Yeshwant Mahavidyalaya, during 09-11 January, 2010 at Nanded, Maharashtra, India.

12. Paper presented titled **"An Improved Clustering Algorithm Based On J-points Located Farthest From Each Other"**, published in International Conference on Systemics, Cybernetics and Informatics (ICSCI - 2009) under the aegis of Pentagram Research Centre, Hyderabad, India.

National Conferences – 03

1. Paper presented titled **"Robust Steganography using Secure Password Protected Scheme"**, published in Proceedings of the 4th National Conference, INDIACom-2010, Computing for Nation Development, February 25-26, 2010, organized by Bharathi Vidyapeeth's Institute of Computer Applications and Management, New Delhi.
2. Paper presented titled **"The J-Strangers Clustering Algorithm"**, published in National Conference on Algorithms (NCA '08) organized by Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandra, Mumbai.
3. Paper Presented titled **"An algorithm for clustering based on finding points in any dataset which represented the final unchanging means"** - National Level Conference on Software as a Service, 2008 sponsored by UGC and organized by Dhempe College of Arts and Science, Goa.

Number of Workshops, Seminars, STTPs, FDPs Attended – 19

STTPs and FDPs

1. Attended a 2 week TEQIP – II sponsored STTP on **"Modelling and Simulation"** organized by Department of Mechanical Engineering, Goa College of Engineering, Farmagudi, Ponda-Goa from 7th December to 18th December 2015.
2. Attended a 1 week ISTE STTP on **"Electronic Advancements and Image Processing in Medical Applications"** organized by Department of Electronics and Communications Engineering, Padre Conceicao College of Engineering, Agnel Institute of Technology and Design, Assagao -Goa from 1st June to 5th June 2015.
3. Attended a 2 weeks ISTE STTP on **"Design of Dynamic Web Pages"** organized by Department of Electronics Engineering & Department of Computer Engineering, Goa Engineering College from 14th to 25th November 2011.
4. Attended a 1 week ISTE STTP on **"Industrial Automation & Process Control"** organized by Department of Mechanical Engineering, Padre Conceicao College of Engineering from 8th to 12th November 2011.
5. Attended a 1 week ISTE STTP on **"Visual Studio 2010 Enabled Technologies"** organized by Department of Computer Engineering & Information Technology, Padre Conceicao College of Engineering from 31st October to 4th November 2011.
6. Attended a 1 week ISTE STTP on **"Graph & Algorithms"** organized by Department of Computer Engineering & Humanities, Padre Conceicao College of Engineering from 4th July to 9th July 2011.

7. Attended a 1 week Staff Development Programme on **"NBA Accreditation ISO and Academic Audit in Technical Education"** organized by National Institute of Technical Teachers' Training and Research, Bhopal from 10th January to 14th January 2011 at NITTTR Extension Centre Goa.
8. Attended a 1 week ISTE STTP on **"Mission 10x"** organized by Wipro Technologies and conducted at Padre Conceicao College of Engineering in July 2009.
9. Participated in the Faculty Development Programme on **"Software, Wi-Max, CAD and SMT Technology"** conducted by Tata Consultancy Services on 25th July 2008 at Padre Conceicao College of Engineering as part of the TCS Academic Interface Programme.

Conferences and Seminars

10. Attended the 5th **IEEE International Conference on Information Communication & Embedded Systems**, "ICICES 2016", February 25 -26, 2016 at S. A. Engg. College, Chennai, India.
11. Attended the **2015 International Conference on Computing and Network Communications** (CoCoNet), Dec 16-19, 2015 at Indian Institute of Information Technology and Management – Kerala (IIITMK), Technopark, Trivandrum, India.
12. Attended the **2nd International Research Conference on Emerging Information Technology and Engineering Solutions**, EITES 2015, 20 - 21 February, 2015 at SCIT, Symbiosis International University, Pune, India.
13. Attended the **National Conference on Algorithms (NCA '08)** organized by Department of Computer Engineering and Information Technology, Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandra, from 16th to 17th May 2008.
14. Attended the **National Level Conference on Software as a Service (SaaS)** on 14th and 15th of March 2008 organized by Department of IT and Computer Science, Dhempe College of Arts and Science, Miramar, Goa India.

Two Week or One Week Workshops

15. Attended a one week workshop on **"Java Fundamentals and Java Programming"** organized and conducted by Oracle Academy at Goa Engineering College in October 2013.
16. Attended and actively participated in the One Week Workshop from 11-15th January, 2010 on **"Tools and Tactics for Digital Security"** organized under the Information Security Awareness Project, Goa College of Engineering, Farmagudi, Ponda, Goa.
17. Attended a 10 day workshop on **"Data Warehousing, Human Decision making and Game Theory"** organized by Department of Computer Science and Technology, Goa University from 21st to 31st May 2007.

Workshops

18. Attended the two day workshop on **"SciLab, LaTeX and Spoken Tutorials"** Conducted by IIT Bombay in association with Information Technology Department, Goa College of Engineering and Goa University on 18th and 19th of January 2010 held at Goa College of Engineering, Farmagudi, Ponda, Goa.

19. Successfully completed the 4 days course on "**ANSYS**" organized by Department of Mechanical Engineering, Padre Conceicao College of Engineering from 15th to 18th January 2008.

Professional Membership

1. Member of The Institute of Engineering and Technology (IET), United Kingdom (UK)
Membership number: 1100527897
2. Life Member of Indian Society of Technical Education (I.S.T.E), Life Membership number:
LM 63405

College Exam Duties

1. Worked as **Chief coordinator of Examinations at AITD** for the 2016, Nov/ Dec, Goa University Semester Exams.
2. Carried out exam related duties such as **Paper Setting, Paper Evaluation, Examiner and External Examiner** for conducting theory, practical and viva-voce exam as appointed by Controller of Examinations, Goa University.

Other Experience

University Board of Studies Chairman/Member

1. Worked as a **Member of Board of Studies (BOS)** of Computer Engineering, Goa University representing AITD from 2014 to 2017 and was actively involved in syllabus formation for Revised Course 2016-17.

College Level Committees

1. Initiated, formed and inaugurated the **First "IET on Campus" (IET Student Chapter)** for the Department of Computer Engineering at Agnel Institute of Technology and Design (AITD), Assagao, Goa, which was also the First IET Student Chapter among all Engineering Colleges in Goa for which AITD was named as the Centre for all IET Events under Goa Region.
2. Worked as the **Faculty Coordinator** of IET (Goa Region) and organized the IET flagship event "**Present Around The World - PATW**" for students at Goa University Level on March 18th 2017.
3. Initiated, named and inaugurated the **First Student Association** of Department of Computer Engineering at AITD called **ACCESS (Association for Confluence of Computer Engineering Students and Senators)** and gave ACCESS its **Constitution** by passing it with voice vote of students from the Department on 12th March 2016.

4. Worked as the **Publications Committee Chairman** and released the First AITD Magazine "**Renaissance**" on 30th April 2016 and also released the First AITD Newsletter "**Vipazyana**" for all Departments on 20th July 2016.
5. Worked as a **Member** of Anti Ragging Committee at AITD, Assagao, Goa.
6. Worked as a **Member** of Academic Committee at AITD, Assagao, Goa.
7. Worked as a **Member** of Kaizen (Disciplinary) Committee at PCCE, Verna, Goa.
8. Worked as a **Member** of Cultural Committee at PCCE, Verna, Goa.
9. Worked as a **Member** of Anti Ragging Committee at PCCE, Verna, Goa.
10. Worked as **Faculty In-charge** of the Student Technical Event Blitzkrieg for Information Technology Department at PCCE, Verna, Goa.

Judge Panel / Staff Selection Committee / Subject Expert

1. Conducted interviews as a **Member of Selection Committee (Dept. Head & Expert)** for Assistant Professor positions, Administrative positions and Lab Assistants at **Agnel Institute of Technology and Design, Assagao, Goa** for the year **2012, 2013, 2014 and 2016**
2. **Judged** the **IET PATW Competition, a Goa University Level paper presentation competition** held by **IET - Mumbai Local Network** at AITD on 03rd February 2018.

Projects / Software Development

1. **Worked as the team convener** for the development of a **prototype integrated website for all institutions under Agnel Charities**. The prototype was designed using JavaScript, HTML5 and CSS.
2. **Worked as the team convener** for development of a **Result Analysis software for AITD**.

Subject Taught

Sr. No.	Name of the Subject	Year/Branch/Semester	Experience
1.	Internet Protocol Design	S.E. M.E. (I.T.) (Sem - III)	4 Years
2.	Advanced Communication Networks	F.E. M.E. (I.T.) (Sem - II)	2 Years
3.	Data Mining and Warehousing	F.E. M.E. (I.T.) (Sem - II)	2 Years
4.	Fuzzy Logic and Neural Networks	B.E. COMP. (Sem - VII)	1 Year
5.	Image Processing, Analysis and Computer Vision	B.E. I.T (Sem - VIII)	1 Year

6.	Data Mining and Warehousing	B.E. I.T (Sem - VII)	1 Year
7.	Image Processing	B.E. COMP (Sem - VIII)	4 Years
8.	Multimedia Systems	B.E. COMP (Sem - VIII)	1 Year
9.	Digital Signal Processing	B.E. COMP (Sem - VII)	4 Years
10.	Theory of Computation	T.E. I.T (Sem - VI)	2 Years
11.	Digital Signal Processing	T.E. I.T (Sem - V)	3 Years
12.	Artificial Intelligence	T.E. COMP (Sem VI)	1 Year
13.	Modern Algorithm Design Foundation	T.E. COMP (Sem VI)	1 Year
14.	Software Engineering	T.E. COMP (Sem VI)	1 Year
15.	Signals and Systems	S.E. I.T (Sem - IV)	2 Years
16.	Data Structures	S.E. COMP (Sem IV)	1 Year
17.	Data Structures using C++	S.E. ECE (Sem IV)	1 Year
18.	Java Programming	S.E. COMP (Sem IV)	1 Year
19.	Data Structures and Algorithms - I	S.E. COMP (Sem III)	1 Year
20.	Logic Design	S.E. COMP (Sem III)	1 Year
21.	Introduction to Java	S.E. ECE (Sem III)	2 Years
22.	Electronic Instrumentation	S.E. COMP (Sem III)	1 Year
23.	Information Technology	F.E. COMP (Sem II)	2 Years