

RESUME

Personal Information:

Name : AMIT KUMAR BISWAS

UID (Aadhaar) : 4170-8615-7633

Father's Name : Mr. A. R. BISWAS

Date of Birth : 12th - May - 1974

Marital Status : Married

Sex : Male

Communication Address : Panchsheel Nagar (WEST),
Post : B. M. Y. Charoda,
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LinkedIn ID : <https://www.linkedin.com/in/amit-kumar-biswas-8ba2b38a/>

Research Gate : https://www.researchgate.net/profile/Amit_Biswas10

Google Scholar : https://scholar.google.co.in/citations?hl=en&user=QeTHL_UAAAAJ



Academic Qualifications:

- **M. C. A.** (Master of Computer Application) under Pt. Ravishankar Shukla University, Raipur (C. G.) with an aggregate of **79.20%** in 2001.
- **M. Sc.** Degree in Maths under Pt. Ravishankar Shukla University, Raipur (C. G.) with an aggregate of **55.13%** in 1997.
- **B. Sc.** Degree in Maths under Pt. Ravishankar Shukla University, Raipur (C. G.) with an aggregate of **58.72%** in 1995.
- **H. S. S.** Certificate (12th standard) under Madhya Pradesh Education Board, Bhopal with an aggregate of **72.50%** in 1992.
- **H. S.** Certificate (10th standard) under Madhya Pradesh Education Board, Bhopal with an aggregate of **68.46%** in 1990.

Teaching Experiences:

- Working as a Lecturer of Computer Science in Rungta College of Information Technology, Durg (C. G.) for 1 Years and 6 Months.
- Working as a Lecturer of Dept. of M.C.A. in Bhilai Institute of Technology, Durg (C.G.) from 03-NOV-2003 for 4 Years and 8 Months..

- Working as a Sr. Lecturer of Dept. of Computer Application in Bhilai Institute of Technology, Durg (C.G.) from July-2008 to Dec-2009.
- Working as an Associate Professor of Computer Application in Bhilai Institute of Technology, Durg (C.G.) from Jan-2010.

Journal Publications:

International:

1. ***“Fractal Image Compression by Domain Classification Using Fractal Dimension of Block Complexity Approach”*** in International Journal of Graphics and Image Processing of IFRSA (International forum of researchers Students and Academician) on Vol 1 No 1, 2011: 129-135.
2. ***“Multi-Scale Domain Classification Based Heart Sound Compression”*** in International Journal of Soft Computing and Engineering (IJSCE) on Vol 2 No 2, 2012: 41-44.
3. ***“Reconstruction of Arteries in Heart Image Affected by Specular”*** in International Journal of Emerging Technology and Advanced Engineering (IJETAEE) on Vol 2, No 8, 2012: 259-263.
4. ***“Fast Fractal Image Compression by Pixels Pattern using Fuzzy C-means”*** in International Journal of Engineering Research, Kuwait, Vol 1 No 3, 2013: 109-121.
5. ***“Phonocardiogram Signal Segmentation and Classification Using Variance Fractal”*** in International Journal of Advanced Research in Computer Science, Vol. 4 No 8, 2013: 265-270.
6. ***“A Comparative Study of Wavelet and Fractal Image”*** in International Journal of Graphics & Image Processing, Vol 4 No 2, 2014: 148-152.
7. ***“Performance of Fractal Image Compression for Medical Images: A Comprehensive Literature Review”***, International Journal of Applied Information Systems, Vol 8 No 4, 2015: 14-24.
8. ***“Fingerprint Recognition Based on Fractal Dimension”***, International Journal for Scientific Research & Development, Vol 3 No 1, 2015: 1352-1355.
9. ***“Detection of Sickle Cell Anemia in Red Blood Cell: A Review”***, International Journal of Engineering and Applied Sciences, Vol 2 No 3, 2015: 45-48.
10. ***“Crack Filling of Art by using Image Processing: A Review”***, International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, Vol 3 No 6, 2015: 48-52.
11. ***“Reconstruction of Arteries in Heart Image Affected by Specular Reflection”***, American International Journal of Research in Science, Technology, Engineering & Mathematics, Vol 12 No 1, 2015: 15-20.
12. ***“Accelerating Fractal Image Encoding by Nearest Neighbor Binary Search”***, International Journal of Emerging Trends in Engineering and Development, Vol 6 No 5, 2015: 209-217.
13. ***“Fuzzy based Fractal Compression for Medical Images by using Pixel Pattern”***, International Journal of Imaging and Robotics, Vol 16 No 2, 2016: 58-65.
14. ***“Reconstruction of Arteries in Heart Image Affected by Specular Reflection Using Fuzzy Image”***, International Review of Applied Engineering Research, Vol 6 No 1, 2016: 9-15.
15. ***“Analysis of Smooth and Complex Domain Blocks Classification for Fractal Image Compression”***, Research Journal of Computer and Information Technology Sciences, Vol 4 No 4, 2016: 1-2.

16. ***“Restoring Structures of Heart Surface Affected by Specular Reflection”***, International Journal for Science and Advance Research in Technology, Vol 2, No 12, 2016: 228-231.
17. ***“Performance analysis of a new fractal compression method for medical images based on fixed partition”***, International Journal of Information Technology, 2020.

National:

1. ***“Fractal Image Compression by Multi-Scale Domain Classification Using Fractal Dimension Based On Block Complexity”*** in CSVTU Research Journal, 2011, Vol 4 No 1: 65-71.

Conference Publications:

National:

1. ***“Fractal Image Compression: An Introductory Overview”*** in National Level conference SAVY-2005 during 28-29 Jan at Shri Shankaracharya College of Engg. and Technology.
2. ***“Fractal Image Compression: An Introductory Overview”*** in National level conference SAVY-2005 during 28-29 Jan at Shri Shankaracharya College of Engg. and Technology.
3. ***“Fractal Image Coding Using Fixed Point”*** in National level conference SAVY-2005 during 28-29 Jan at Shri Shankaracharya College of Engg. and Technology.
4. ***“Fractal Compression In Efficient Communication”*** in National level conference ACT-2005 during 5-6 April at Bhilai Institute of Technology, Durg (C.G.).
5. ***“Development Of An Algorithm For Fractal Image Encoding And Decoding”*** in 4th Chhattisgarh Young Scientist Congress, Indira Gandhi Agriculture University, Raipur (C.G.), 2006.
6. ***“An Quad-Tree Algorithm For Fractal Image Encoding And Decoding”*** in National level conference Technologia 2007 during 2-3 March 2007 at M.P. Christian College of Engg. & Technology, Bhilai (C.G.).
7. ***“Fuzzy Based Classification Of Domain Blocks For Fractal Image Compression”*** in National level conference AICTE sponsored national level Seminar on *Modern Trends in Applied Mathematics Towards the Application of Fuzzy Logic* during 8-9 July, 2010 at Bhilai Institute of Technology, Durg (C.G.).
8. ***“Restoration Of Hear Surface Structure In Image Affected By Specular Reflection”*** in National level conference (Technologia 2012) at Christian College of Engg. & Technology, Bhilai (C.G.).
9. ***“An Quad-Tree Algorithm for Fractal Encoding and Decoding of Medical Images”*** in the self financed National level conference Computer Applications in Education and Research for Science & Technology: Developments and Prospects (CAERST-2018) during 16-17 Jan 2018 in the Department of Computer Applications at NIT, Raipur, International Research Publication House, Delhi, ISBN: 978-93-87388-21-5.

Conference (Participated/Presented Paper)

International:

1. Present a paper titled “**Fractal Image Compression: An Implementation of Contractive Mapping Fixed Point**” in the International Conference on Mathematical Sciences and Applications (ICMSA-2018) during 23-25 Feb 2018 in the Department of Pure and Applied Mathematics, Guru Ghasidas University, Bilaspur (C.G.).
2. Present a paper titled “**Effectiveness of the fractal dimension based classification methods for fractal compression of medical images**”, in the 1st IEEE International Conference on Power, Control and Computing technologies (ICCPC2T) 2020 during 03-05 JAN 2020 organize by the Department of Electrical Engineering, NIT, Raipur (C. G.). DOI: [10.1109/ICPC2T48082.2020.9071440](https://doi.org/10.1109/ICPC2T48082.2020.9071440)

National:

1. Presented a paper titled “**An Quad-Tree Algorithm for Fractal Encoding and Decoding of Medical Images**” in the self financed National level conference Computer Applications in Education and Research for Science & Technology: Developments and Prospects (CAERST-2018) organized by the department of Computer Applications, NIT, Raipur during 16-17 Jan 2018.
2. Presented a paper titled “**Fractal Image Compression-An Application of Fixed Point**”, under the theme of Disruptive Technology in Applied Mathematics in the AICON’18 (All India Conference) Organize by Department of Mathematics, CSIT, Durg (C.G.) during 20-21 APRIL 2018.

Attended:

1. A National conference **BITCON-2007** on “*Technological Advancements In Processing and Decision Making*”, Organized by Dept. of Computer Applications at Bhilai Institute of Technology, Durg(C.G.) on 16-17 March 2007.

SEMINARS / WORKSHOPS / GUEST LECTURE / SHORT TERM COURSES:

Attended:

1. A Seminar on “**ENTERPRISE RESOURCE PLANNING THROUGH SAP R/3**” at Bhilai Institute of Technology, Durg (C.G.), held on 21 Sep., 2005.
2. A QIP Short Term Course of 7 days on “**LOGIC AND APPLICATIONS OF LOGICS**” sponsored by AICTE and organized by IIT, Kharagpur during 8-12 Oct., 2007.
3. A two days Short Term Course on “**DATA STRUCTURE, ALGORITHM AND COMPLEXITY**” Sponsored by Indian Association for Research in Computing Science (IARCS) and organized by Dept. of Computer Applications, BIT, Durg during 26-27 Sep., 2008.
4. A workshop on “**RESEARCH METHODOLOGY OF ENGINEERING AND TECHNOLOGY**” organized by Dept. of Mechanical, Bhilai Institute of Technology, Durg held on 25 Sep., 2008.
5. A one day Short Term Course on “**FORMAL LANGUAGE AND AUTOMATA THEORY**” Sponsored by Indian Association for Research in Computing Science (IARCS) and organized by Dept. of Computer Science and Engg., BIT, Durg held on 13 March, 2009.

6. A QIP Short Term Course of 14 days on “**IMAGE AND VIDEO PROCESSING**” sponsored by AICTE and organized by IIT, Kharagpur during 23-Nov 6-Dec, 2009.
7. A Two-Days Workshop on “**OPEN SOURCE SOFTWARE**” organized by Dept. of Computer Science & Engg. during 7-8 December, 2010
8. An ISTE-Workshop of 14 days on “**DATABASE MANAGEMENT SYSTEM**” conducted by IIT, Bombay and organized by NIT, Warangal (A.P.) during 13-23 December, 2010.
9. A ISTE-Workshop of 14 days on “**INTRODUCTION TO RESEARCH METHODOLOGY**” conducted by IIT, Bombay and organized by BIT, Durg (C.G.) during 25-Jun 04-July, 2012
10. An ISTE-Workshop of 2 days on “**AAKASH FOR EDUCATION**” conducted by IIT, Bombay and organized by BIT, Durg (C.G.) during 10-11 Nov., 2012.
11. A one week ISTE-Workshop on “**CYBER SECURITY**” under the National Mission on Education through ICT (MHRD, Govt. of India), conducted by IIT, Bombay and organized by BIT, Durg(C.G.) during 10-20 July, 2014.
12. A one day National Workshop on “**SCIENTIFIC PAPER WRITING**” organized by BIT, Durg (C.G.) held on 15 Oct., 2016.
13. A one week self financed Short Term Training Program on “**MEDICAL SIGNAL AND IMAGE PROCESSING-II (2ND MSIP-2017)**”, organized by Department of Electrical Engineering and Department of Computer Applications, NIT, Raipur (C.G.) from 22-26 Jun, 2017.
14. A two days National Workshop on “**Innovative Research in Pedagogy for Mini MOOCs Blended with Instruction Strategies to Enhance Quality of Higher Education**”, organized by department of computer science and engineering sponsored by Royal Academy of Engineering (UK) and Thapar University, Patiyala held on 18-19 Sep. 2017.
15. A three days Workshop on “**Human Value for Mentor**”, organized by CSVTU, Bhilai under TEQIP-III during 05-07 June 2018.
16. A one week FDP on “**Big Data Analytics using Hadoop and Spark**”, during 26 Nov-01 Dec 2018 organized by BIT, Durg.
17. A one week FDP on “**Data Science and its Applications**” sponsored by AICTE Training and Learning (ATAL) Academy organized by Department of Computer Science & Engineering, NIT, Raipur(C.G.).
18. A one week online FDP on “**Effective and Efficient Online Teaching in the Age of Corona, A Hands On Workshop**” organized by the Teaching Learning Centre (ICT) as IIT Bombay during 11-17 MAY 2020.
19. A one week online FDP on “**Blockchain**” sponsored by AICTE Training and Learning (ATAL) Academy organized by PSNA College of Engineering and Technology, during 24-28 AUG-2020.
20. A one day workshop on “**Developing Thinking Abilities Relevant for Engineering Education**” organized by Face Prep Help on 28 APR-2020.
21. A one day Webinars on “**Robotics-Connecting Engineering Minds**” organized by McGraw Hill on 22 JUL-2020.
22. A one week online FDP on “**Data Science using Python**” sponsored by AICTE Training and Learning (ATAL) Academy organized by Govt . Polytechnic Gandhinagar during 20-27 NOV-2020.

23. A one week online FDP on “**Outcome based Education in Perspective to New Education Policy**” organized by BIT, Durg under AICTE Margdarshan Scheme during 6-11 Sep-2021.
24. A one week online FDP on “Recent Trends and Tools for Data Analytics (RTTDA)” organized by Center of Excellence in Data Science & Department of Computer Science and Engineering G H Raison College of Engineering Maharashtra, India during 9-13 JAN 2023.

GUEST LECTURE

1. Delivered a guest lecture on “**Basics of LaTeX and Image Processing using MATLAB**” in a two days workshop under the banner of IEEE Student Branch(Code: 14891) and organized by BIT, Durg during 22-23 Dec., 2014.
2. Delivered a guest lecture on “**Computer Language, Algorithm, Internet, WWW, Bigdata & Electronic**” organized by Shaildevi College, Anda, Durg (C.G.) on 21 Jan 2019.
3. Delivered a guest lecture on “**Image Processing Techniques using MATLAB**” organized by Department of Computer Science, BIT, Durg on 21 Nov 2019.

ORGANIZED:

1. A one day National level Conference **BITCON 2017** as a member of organizing committee organized by Department of Computer Applications, BIT, Durg held on 28 March, 2017.
2. A two days National Workshop Innovative Digitization Techniques Towards Mission Digital India (IDT-MDI, 2018) as a member of organizing committee organized by the Department of Computer Applications, BIT, Durg during 12-13 Feb 2018.
3. A one day National level Conference **BITCON 2018** as a member of organizing committee organized by Department of Computer Applications, BIT, Durg held on 15 Feb, 2018.
4. A two days National Workshop Innovative Digitization Techniques Towards Mission Digital India (IDT-MDI, 2019) as a member of organizing committee organized by the Department of Computer Applications, BIT, Durg during 22-23 Feb 2019.
5. A two days 9th International Science Congress (ISC-2019) organized by BIT, Durg (C.G.) during 8-9 DEC 2019.

M. Tech / B.E. Project Supervisor:

1. Supervise a M. Tech. project title on “*Fractal Heart Sound Compression by Multi-Scale Domain Classification using Variance Fractal Dimension on Sample Complexity*”, submitted by Mayur Amte (Roll No.: **5015208009** & Enrollment No.: **AE1517**), M. Tech. Scholar in the faculty of Electronics and Telecommunication Engg. with specialization in Instrumentation and Control of CSVTU, Bhilai 2011.
2. Supervise a M. Tech. project title on “*Reconstruction and Segmentation of Specularly Reflected Heart Arteries using Delaunay Triangulation*”, submitted by Divesh Kumar Gajpal (Roll No.: 5015210001, Enrollment No.: AB1749), M. Tech. Scholar in the faculty of Electronics and Telecommunication Engg. with specialization in Instrumentation and Control of CSVTU, Bhilai 2012.
3. Supervise a M. Tech. project title on “*Phonocardiogram Signal Segmentation and Classification using Variance Fractal Dimension*”, submitted by Nirmla Verma (Roll No.:

- 5015210003, **Enrollment No.:** AA8785), M. Tech. Scholar in the faculty of Electronics and Telecommunication Engg. with specialization in Instrumentation and Control of CSVTU, Bhilai 2012.
4. Supervise a M. Tech. project title on “***Recognition of Sickle Cell Anemia Present in Red Blood Cell***”, submitted by Menika Sahu (**Roll No.:** 5015213006, **Enrollment No.:** AM4693), M. Tech. Scholar in the faculty of Electronics and Telecommunication Engg. with specialization in Instrumentation and Control of CSVTU, Bhilai 2016.
 5. Supervise a M. Tech. project title on “***Crack Filling of Art by using Image Processing***”, submitted by Anubhav Singh (**Roll No.:** 5015213018, **Enrollment No.:** AM9269), M. Tech. Scholar in the faculty of Electronics and Telecommunication Engg. with specialization in Instrumentation and Control of CSVTU, Bhilai 2016.
 6. Supervise a M. Tech. project title on “***Fingerprint Recognition based on Fractal Dimension***”, submitted by Nisha Chandrakar (**Roll No.:** 5015213007, **Enrollment No.:** AF4217), M. Tech. Scholar in the faculty of Electronics and Telecommunication Engg. with specialization in Instrumentation and Control of CSVTU, Bhilai 2016.
 7. Supervise a M. Tech. project title on “***Recognition of Arteries in Heart Image Affected by Specular Reflection using Fuzzy Image Enhancement***”, submitted by Praneet Sharma (**Roll No.:** 5015214012, **Enrollment No.:** AP3428), M. Tech. Scholar in the faculty of Electronics and Telecommunication Engg. with specialization in Instrumentation and Control of CSVTU, Bhilai 2016.
 8. Supervise a B.E. (Final Year) project title on “***Brain Detection & Segmentation using Histogram based Region Growing Technique***”, submitted by Madhumita Chakrabarty (Roll No.: 3013309046, Enrollment No.: AF9118), B.E.(Final Year) Scholar in the faculty of Information Technology of CSVTU, Bhilai 2013.

Book:

1. Published a book of title “***Fractal Heart Sound Compression using Variance Fractal Dimension***”, LAMBERT Academic Publishing, JAN 2018, ISBN: 978-613-5-81295-4.
2. Published a book of title “***Automatic Recognition of Sickle Cell Anemia Present in the Red Blood Cell***”, LAMBERT Academic Publishing, OCT 2018, ISBN: 978-613-9-90861-5.

YouTube Video Lectures (Channel Name: E-Teaching Gurukul):

1. Android Programming
<https://www.youtube.com/playlist?list=PLIS2VtJqUQPE1xPMR0X3HYY5NezQAzcOB>
2. Fundamentals of Computer in Hindi
https://www.youtube.com/playlist?list=PLIS2VtJqUQPFoV6YSSZ_5hCgu2miaJUsg
3. Computer Graphics
<https://www.youtube.com/playlist?list=PLIS2VtJqUQPGtQdFISEQAACRsuIYDnZ40>
4. Compiler Design
<https://www.youtube.com/playlist?list=PLIS2VtJqUQPENScyB0d9YDhyq5OYiJl2m>
5. Computer Network
<https://www.youtube.com/playlist?list=PLIS2VtJqUQPGVHgyaa6drzFH3bDEdLwZV>

6. Internet and Web Technology
<https://www.youtube.com/playlist?list=PLIS2VtJqUQPEMI9lcCY4VH4mDnqMPkGr3>
7. Programming in C Language
<https://www.youtube.com/playlist?list=PLIS2VtJqUQPGrJRh1aC04SQX1txmFtg>
8. Computer Graphics Programming in C
https://www.youtube.com/playlist?list=PLIS2VtJqUQPErfQdY64Rbfg_9r5KiibJP
9. Image Processing using MATLAB
<https://www.youtube.com/playlist?list=PLIS2VtJqUQPE-dUUs2I3dIO-NB77-KI7i>

Android App:

1. **Fundamentals of Computer**
<https://play.google.com/store/apps/details?id=akb.foc.com&hl=en>
2. **Compiler Design Tutorial**
<https://play.google.com/store/apps/details?id=com.akb.compilerdesigntutorial&hl=en>
3. **Computer Graphics Tutorial**
<https://play.google.com/store/apps/details?id=com.akb.cgm&hl=en>
4. **Internet and Web Technology**
<https://play.google.com/store/apps/details?id=akb.iwt.com&hl=en>
5. **Programming in C Language**
<https://play.google.com/store/apps/details?id=akb.c.com>

Award:

1. **4th Chhattisgarh Young Scientist Congress** Organized by Indira Gandhi Agriculture University, Raipur (C.G.), 2006.

Copyright

1. A copyright of computer software work of title **“Pixel-Peak based Fractal Image Compression for Grayscale Images: An innovative algorithm and its Software implementation using MATLAB 2015a”** published on 25 SEP 2019, Reg. No. sw-12857/2019.

Extra Curricular Activities (After joining the Institute):

1. Act as a Judge in the event of **“Technical Paper Presentation”** (Student’s Category) **SAVVY-2005**.
2. Act as an event coordinator for the Annual Techno-Cultural-Sports Fest **OJAS’17**, organized by BIT, Durg during 29-30 March, 2017.
3. Act as an event in-charge of LAN Gaming in **OJAS’19 - A National level Techno-Cultural-Sports Fest** during 29-30 March, 2019, organized by Department of Computer Applications, BIT, Durg.

4. Act as a Judge in the online technical paper presentation competition titled “**Engineers for Skill Development & Employment in Combating COVID**” on the occasion of Engineers’ Day organized by Professional Activity Club BIT, Durg on 15 SEP 2021.

I hereby declared that all the details given above are true and correct.

(Amit Kumar Biswas)

Associate Professor

Department of Computer Applications

Bhilai Institute of Technology, Durg(C.G.)