

## Curriculum Vitae

### **Dr. Grasha Jacob, M.C.A., M.Phil., Ph.D**

Associate Professor & Head,  
Department of Computer Science,  
Rani Anna Government College for Women,  
Tirunelveli – 627 008.

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1. **Date of Birth** : Jan 28, 1971
2. **Sex** : Female
3. **Address for Communication:** W/o. Mr. R. Ranjit Rajappa,  
14 B2, 14<sup>th</sup> Street, Rahmath Nagar,  
Tirunelveli – 627 011.
4. **Educational Qualification:** M.C.A., M. Phil., Ph.D

<b>Exam Passed</b>	<b>Board/University</b>	<b>Subject</b>	<b>Year of passing</b>	<b>Class</b>
High School	Board of Secondary School Education, Tamilnadu		1986	Merit
Higher Secondary	Board of Higher Secondary School Education, Tamilnadu	Mathematics, Physics, Chemistry Computer Science	1988	I Class
B.Sc.	Madurai Kamaraj University	Physics	1991	I Class
M.C.A.	Avinashilingam University, Coimbatore	Computer Applications	1994	A Grade
M.Phil.	Manonmaniam Sundaranar University, Tirunelveli	Computer. Science	2003	I Class
Ph.D	Bharathiar University, Coimbatore	Computer Science	2016	

## 5. Additional Competency

- i) SLET, Bharathidhasan University, March 1997
- ii) TRB, August 1997
- iii) Account Test for Executive Officers, May 2003

6. Area of Interest : DNA Computing, Information Security  
Image Processing

## 7. Teaching Experience

- i. U.G. : 22 years
- ii. P.G.(MSc/MCA) : 8 years
- iii. M.Phil : 4 years

## 8. Faculty Development Programme attended:

Course Name	Training Provider	Subject	Duration
Refresher Course	Government of Tamil Nadu	Computer Science	Jan 17, 2005 – Jan 22, 2005
Train The Trainer	NASSCOM CTS, Chennai	Soft Skills	Aug 4, 2008 – Aug 7, 2008

9. Workshops attended: 7

10. National Conferences – Papers presented - 7

11. International Conference – Papers presented - 4

## 12. Publications :

- i) **Grasha Jacob** and A Murugan. DNA Computing : Challenges and Applications. *RAC Journal of Research* ( ISSN : 2230-7362 ) 1 (2), 5 – 9, 2011.
- ii) **Grasha Jacob** and A. Murugan. DNA based Cryptography: An Overview and Analysis. *International Journal of Emerging Sciences* 3(1), 36–42, 2013.
- iii) **Grasha Jacob** and A. Murugan. A Hybrid Encryption Scheme using DNA Technology. *International Journal of Computer Science and Communication Security*, 3(2), 61-65, 2013.

- iv) **Grasha Jacob** and A. Murugan. An Encryption Scheme with DNA Technology and JPEG Zigzag Coding for Secure Transmission of Images. *arXiv preprint*, May 2013. arXiv:1305.1270
- v) A. Murugan and **Grasha Jacob**. On the Secure Storage and Transmission of Health Care Records Based on DNA Sequences. Jan 2014 © 2014 IEEE DOI
- vi) **Grasha Jacob** and A. Murugan. Secure Storage and Transmission of Images Based on a Dual Encryption Scheme. *ARPJ Journal of Engineering and Applied Sciences*, 9(11), 2014 (ISSN 1819-6608)
- vii) **Grasha Jacob**, A, Murugan and Y. Irine Viola. Towards the Generation of a Dynamic Key-Dependent S-Box to Enhance Security. Cryptology ePrint archive, 2015.
- viii) **Grasha Jacob**, R Shenbagavalli, S Karthika. Detection of surface defects on ceramic tiles based on morphological techniques, arXiv preprint arXiv:1607.06676, 2016
- ix) A Murugan and **Grasha Jacob**. Towards the Secure Storage of Images on Multi-Cloud System, <https://arxiv.org/ftp/arxiv/papers/1611/1611.07633.pdf>, 2016
- x) A Murugan and **Grasha Jacob**. An Integrated approach for the Secure Transmission of Images based on DNA Sequences <https://arxiv.org/abs/1611.08252>, 2016

**13. Books – CoAuthored** : **Visual Basic Programming  
A Step by Step approach**  
Margham Publications  
ISBN: **978-93-81430-05-7**

**14. Book Chapters:**

i. **Handbook of Research on Modern Cryptographic Solutions for Computer and Cyber Security: Chapter 21**

Murugan A and **Grasha Jacob**

*DNA Sequence Based Cryptographic Solution for Secure Image Transmission*

pages 505-527

Publisher: **IGI Global**

ii. **Pattern and Data Analysis in Healthcare Settings: Chapter 2**

Murugan A and **Grasha Jacob**

*Secure Storage and Transmission of Healthcare Records*

pages 7 – 34

Publisher: **IGI Global**

### 15. Research Experience:

Name of the degree	Total no. of Students	Degree Awarded	Guiding at Present
M.Phil	4	2	2

### 16. Editorship of Journals

#### Review Committee member:

- i. Elsevier – Journal of Computers in Biology and Medicine
- ii. Elsevier – Journal of Mathematical BioSciences
- iii. Elsevier – Journal of Information Sciences
- iv. Elsevier – Journal of BioSystems
- v. Journal of Economics and International Business Management
- vi. The Journal of Engineering
- vii. International Journal of Network Security

### 17. Position held / Leadership role played in organizations linked with extension work and National Service Scheme (NSS) or NCC or any other similar activity.

Outreach Coordinator of the Department for 3 years

#### I) Participation in corporate life :

College	<ol style="list-style-type: none"><li>a. Chief Superintendent of Nov 2009, Manonmaniam Sundaranar University Examinations</li><li>b. Head, Department of Computer Science from August 2008.</li><li>c. Member, Staff Council from August 2008</li></ol>
Co-curricular activities	<ol style="list-style-type: none"><li>a. Served as Co-Ordinator, Grievance Redressal Cell from 2006 – 2009</li><li>b. UGC – Coordinator from July 2010 – May 2016</li><li>c. ICT-ACT Soft Skills Training – Coordinator from 2012 – ‘14</li></ol>
Society	<ul style="list-style-type: none"><li>• Member, Inspection Commission, Manonmaniam Sundaranar University, Tirunelveli</li><li>• Member, Interview Panel, District Collectorate, Tirunelveli</li><li>• Member, Interview Panel, Govt. Siddha College, Tirunelveli</li></ul>

## **18. Membership / Participation in bodies / Committee on Education and National Development**

**1. Member, Valuation Board, TNPSC, Chennai**

**2. Member, Board of Studies**

- Sadakatullah Appa College - 2012 –'15
- Sarah Tucker College for Women - 2013 – '16

**3. Board of Examination / Question Setting:**

**a. M.Phil Dissertation Valuation Panel – Bharathiar University, Coimbatore**

**b. Additional Examiner**

Theory and Practical Examinations, Manonmaniam Sundaranar University, Tirunelveli.

**c. Question Setting for Theory Examinations in Autonomous Institutions**

- Sadakkathullah Appa College, Tirunelveli.
- Sarah Tucker College, Palayamkottai
- St. Xaviers College, Palayamkottai
- Avinashilingam University, Coimbatore
- Scott Christian College, Nagercoil
- Yadava College, Madurai
- Standard Fireworks Rajarathinam College, Sivakasi
- Sri Meenakshi Government College for Women, Madurai
- St. Mary's College, Tuticorin
- St. Joseph's College, Tiruchirapalli
- Jamal Mohammed College, Tiruchirapalli

## **19. Member of Professional bodies/ Societies**

Member, SJDWIC

## **20. Details of Seminars, Conferences symposia organized**

- a. State Level Workshop on "Hands on Training on Matlab" on 17.02. 2014
- b. State Level Hands on Workshop on Mobile-Apps Creation, 09.10. 2015