

PROFILE



Name : **DR. SR. P. HELEN CHANDRA**
Designation : Associate Professor
Department : Mathematics
Date of Birth : May 18, 1961
Date of Appointment : July 2, 1990

CONTACT DETAILS:

Present Addresses : St. Anne's Convent
Jayaraj Annapackiam College for Women,
Periyakulam.

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ACADEMIC

S. No.	Degree	University/Institution	Year of Completion
1.	Ph.D.	Madras Christian College, Chennai, University of Madras.	2004
2.	M.Phil.	Madurai Kamaraj University, Madurai.	1996
3.	M.Sc.	National College, Trichy.	1989
4.	PGDCSA	St. Joseph's College, Trichy .	1990

Total Experience : 23 years

Area of Specialization/Interest: Formal Language Theory and Applications, Theory of Computation, Pattern Recognition

Professional Affiliation:

- Secretary of Jayaraj Annapackiam College, Periyakulam: 2010 – till date .
- Education Coordinator, Maria Province, Madurai: 2006 – 2012.
- Life member of “The Indian Society for Technical Education”, New Delhi, LM 425432.

- Secretary of Xavier Board of Higher Education in India, Tamilnadu Region, 2004 – 2007.
- University Nominee of the Board of Studies in Mathematics of Arul Anandar College, Karumathur, 2011 - 2013.
- Director of SARWODEP, Day Care Centre for Differently Abled (DAYSTAR) (2010-2012)
- Controller of Examinations, Jayaraj Annapackiam College for Women, Periyakulam (2004-2008).
- Vice Principal, Jayaraj Annapackiam College for Women, Periyakulam (1993 – 1994) .
- Head of the Dept. of Computer Science, Jayaraj Annapackiam College for Women, Periyakulam (1997 - 2008).
- NSS Programme Officer, Jayaraj Annapackiam College for Women, Periyakulam (1995 – 1998).

RESEARCH EXPERIENCE

- Guided Two M.Phil.
- Guided One Ph.D.

Project Undertaken

Title of the Project : Contextual Array Grammars and Languages

Funding Agency : UGC

Period : 2003-2005

Amount Sanctioned : Rs. 30,000/-

PUBLICATIONS

- **P. Helen Chandra**, S. M. Saroja Theerdus Kalavathy, : Array P Systems with Hybrid Teams. BIC-TA 2012: in Advances in Intelligent Systems and Computing **201** Volume 1 DOI: 1007/978-81-322-1038-2_21 **Springer 2013, 239-249**
- S.M. Saroja Theerdus Kalavathy and **P. Helen Chandra**, A Generative Model For Picture Arrays Based On Test Tube Systems And Array Splicing, Computational and Mathematical Modelling , **Narosa Publishing House, 2012, 398-405.**
- K. G. Subramanian, A. Roslin Sagaya Mary, **P. Helen Chandra**:On Special forms of Splicing on Arrays and Graphs, , in Languages : Bio Inspired Approaches, **TRIANGLE 6**, December 2011, 119-134
- S.M. Saroja Theerdus Kalavathy, **P. Helen Chandra** and K. G. Subramanian, Fuzzy Puzzle Grammar and Languages, Advances In Image Analysis and Applications, **Research Publishing House , 2011,85-92**
- S. M. Saroja Theerdus Kalavathy, **P. Helen Chandra**: Double Hexagonal Array Splicing System. BIC-TA 2011: **IEEE Computer Society, IEEE Press, 2011, 176-181**
- S. M. Saroja Theerdus Kalavathy, **P. Helen Chandra**: k - Context Free Puzzle Grammar and Languages. IICAI 2011: 580-589

- **P. Helen Chandra**, S. M. Saroja Theerdus Kalavathy: H_n array splicing system. BIC-TA 2010: **IEEE Computer Society, IEEE Press, Volume2, 2010**, 1424-1428
- K. G. Subramanian, Do Long Van, **P. Helen Chandra**, Nghiem Do Quyen: Array Grammars with Contextual Operations. *Fundam. Inform.* 83(4): 411-428 (2008).
- K. G. Subramanian, A. Roslin Sagaya Mary, **P. Helen Chandra**: On the Inference of Linear Single Tree Grammars from Positive Structural Information. *IICAI 2007*: 104-111.
- **P. Helen Chandra**, K.G. Subramanian, Simple Contextual Array Grammars and Languages , **In Computing and Mathematical Modeling**, Eds. K. Thangavel & P. Balasubramanian, Narosa Publishing House Pvt. Ltd., New Delhi (2006) 282 – 290.
- K. G. Subramanian, Ramakrishnan Saravanan, **P. Helen Chandra**: Cooperating Basic Puzzle Grammar Systems. *IWCIA 2006*: 354-360
- **Helen Chandra**, C. Martin Vide, K. G. Subramanian, D.L. Van, P.S. P. Wang, "Parallel contextual array grammars with trajectories", **In Handbook of Pattern Recognition and Computer Vision**, 3rd edition, editors: C.H. Chen and P.S.P. Wang,, **World Scientific Publishing Company, Spring 2005**, 55 - 70 , ISBN 981 – 256 – 105 – 6
- **P. Helen Chandra**, K.G. Subramanian, A. Roslin Sagaya Mary, Splicing on Images , **In “Computational Mathematics”** Eds. K. Thangavel & P. Balasubramanian, Narosa Publishing House Pvt. Ltd., New Delhi (2005) 126 – 131.
- **P. Helen Chandra**, K. G. Subramanian, D. G. Thomas: Parallel Splicing On Images. *IJPRAI* 18(6): 1071-1091 (2004)
- **P. Helen Chandra**, K. G. Subramanian, D. G. Thomas: Parallel Contextual Array Grammars and Languages. *Electronic Notes in Discrete Mathematics* 12: 106-117 (2003)
- **P. Helen Chandra**, K. G. Subramanian, D. G. Thomas, Do Long Van: A note on parallel splicing on images. *Electr. Notes Theor. Comput. Sci.* 46: 255-268 (2001)
- K. G. Subramanian, D. G. Thomas, **P. Helen Chandra**, Maia Hoeberechts: Basic Puzzle Grammars and Generation of Polygons. *Journal of Automata, Languages and Combinatorics* 6(4): 555-568 (2001)

Books Published

- Fundamentals of Computers and Office Automation
- Computer Hardware and Maintenance

PRESENTATIONS

International Conferences (Abroad)

- *“A Note On Basic Puzzle Grammar Generating Geometric Figures”*, Tri-Conference event –Half Century of Automaton Theory_Workshop on DCAGRS – 2000 , **University of Western Ontario, Canada**, from 24 – 29, July 2000
- *A Note on Self cross-over of Circular Words and Arrays*. Workshop on Membrane Computing (WMC-2001), **Curtea de Arges, Romania**, from 20 – 22, August 2001.
- *A Note on Parallel Splicing on Images*, International Workshop on Combinatorial Image Analysis (IWCIA-2001), **Temple University Philadelphia, USA** from 23 –

24, August 2001

- *Parallel contextual array grammars and languages*, International Workshop on Combinatorial Image Analysis, (IW CIA 2003), **University of Palermo, Palermo, Italy** from 14 – 16, May 2003

International Conferences (India)

- *Array P Systems with Hybrid Teams*, International Conference on Bio Inspired Computing : Theories and Applications 2012 (BICTA 2012), **Atal Bihari Vajpayee Indian Institute of Information Technology and Management, Gwalior**, 14-16, December, 2012.
- *Hybrid Context-free Puzzle Grammars*, International Conference on “Mathematics in Engineering and Business Management”, **Stella Maris College , Chennai**, 9-10, March 2012.
- *k-context free puzzle grammar and languages*, 5th Indian International conference on Artificial Intelligence (IICAI -11) **Siddaganga Institute of Technology, Tumkur, Karnataka**, 14-16, December 2011.
- *On the Inference of Linear Single Tree Grammars from Positive Structural Information*, Indian International Conference on Artificial Intelligence, National Insurance Academy, **Pune.**, 17 – 19 December, 2007
- “*On parallel Array P Systems* ”, **International Conference** on Mathematics and Computer Science, 1– 3, March, 2007, Loyola College Chennai.
- “*Apical Growth Filamentous Systems and Learning*”, International conference on Discrete Mathematics, Indian Institute of Science, **Bangalore**, 15 – 18 December, 2006

National conferences

- *Cooperating Grammar System and Picture Languages*, National Seminar on “Emerging Trends in Applications of Mathematics” (ETAM 2008), Fatima College (Autonomous), **Madurai.**, 14 – 15 February, 2008,
- *External Contextual Array Splicing Grammar Systems*”, National Conference, March 2007. Gandhigram Rural Institute, Gandhigram
- *Rectangular Array Rewriting P system*, National Conference on Intelligent Optimization Modeling, The Gandhigram Rural Institute, **Gandhigram**, 03 – 04, March 2006
- *Simple Contextual Array Grammars and Languages*, National Conference on Computing and Mathematical Modeling, The Gandhigram Rural Institute, Gandhigram, 25 – 26, March 2005
- *Splicing on Images*, National Conference on Recent Trends in Computational Mathematics, The Gandhigram Rural Institute, **Gandhigram**. 18 – 19, March 2004

AWARDS

- *Best NSS Programme Officer Award* for the year 1997 - 98 in Madurai Kamaraj University, Madurai
- *Bharat Shiksha Ratan Award* for excellence in chosen field of activity by Global Society for health and Educational growth, New Delhi, 14.2.2011 in National Seminar on Individual Achievements and National Development.

Resource Person

Delivered lecture on

- **Basic Puzzle Grammar Generating Geometric Figures** to the students in **Cardamom Planters Association College, Bodi** on 08.09.2000.
- **Splicing on Images** in **Refresher Course** conducted at **Ganghigram Rural Institute, Gandhigram** on 2.12.2004
- **Recent Developments in Applied Mathematics** in the State Level Conference at **J. A. College for Women, Periyakulam** on 21st September, 2005.
- **Theory and Applications of Formal Languages** in the Instructional Conference on ‘Research Trends in Information Technology’ (RTIT 2007) held at **chh. Shahu Central Institute of Business Education & Research (SIBER), Kolhapur, India** on March 3rd & 4th, 2007.
- **Application of Mathematic, 14.01.2008, Annai Velankanni College, Tholayavattam, (Via) Karungal.**
- **Automata Theory and Formal languages** during the Mathematical Association held on 24, February 2009 organized by the Department of Mathematics, **Fatima College, Madurai.**
- **Application of Mathematics** during the Mathematical Association held on 26, February, 2009 organized by Department of Mathematics, **Arul Anandar College, Karumathur, Madurai.**
- **Tiling Recognizable Languages** organized by Department of Mathematics, **J. A. College**, in December, 2012.

COUNTRIES VISITED

Place & Name of the Country	Duration	Purpose of Visit	Funding Agency
University of Western Ontario, London, Ontario, Canada	23, July 2000 - 22, August 2000	To present a paper on “A Note On Basic Puzzle Grammar Generating Geometric Figures” in Tri-Conference event –Half Century of Automaton Theory, Workshop on DCAGRS – 2000	TNSCST
Curtea de Arges, Romania	18 -22, August 2001	To present a paper on “A Note on Self cross-over of Circular Words and Arrays “in WMC 2001	INSA
Temple University, Philadelphia, U. S. A.	23 - 31, August 2001	To present a paper on “A Note on Parallel Splicing on Images “ in IWCIA 2001	DST
University of Palermo, Palermo, Italy	13 - 22, May 2003	To present a paper on “Parallel contextual array grammars and languages” in IWCIA 2003	UGC
Liver Pool Hope University, LONDON	14 – 22 July, 2013	Discussion for Linkage Programme	Liver Pool Hope University