



ADITYA ENGINEERING COLLEGE

An Autonomous Institution

Approved by AICTE • Permanently Affiliated to JNTUK • Accredited by NAAC with 'A' Grade

Recognised by UGC under sections 2(f) and 12(B) of UGC Act, 1956

Aditya Nagar, ADB Road, Surampalem - 533437, Near Kakinada, E.G.Dt., Ph:99498 76662

List of Books published during the year 2021

S. No.	Title of the Book	Page No.
1.	A Generalized Approach for Optimal Placement of Various FACTS Devices	1-3
2.	Micro Python for the Internet of Thing	4-7
3.	Fundamental of Python Programming	8-15
4.	Definitions for Mechanical Engineering -Volume 1	16-18
5.	Personalized Cancer Medicine	19-22
6.	Innate responses of chicken antibodies towards malarial antigens	23-25



Srinivasa Rao Veeranki

Srinivasa Rao R

A Generalized Approach for Optimal Placement of Various Facts Devices

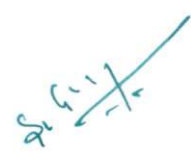
LAP **LAMBERT**
Academic Publishing

S. V. Rao

PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

Table of contents

INTRODUCTION	01
LITERATURE SURVEY	09
STATIC MODELING OF FACTS DEVICES	49
GENERALIZED APPROACH FOR DETERMINATION OF OPTIMAL LOCATION OF FACTS DEVICES	58
OPTIMAL PLACEMENT OF FACTS DEVICES IN THE PRESENCE OF CONTINGENCY	110
OPTIMAL PARAMETER SETTING OF FACTS DEVICES	132
CONCLUSIONS	160
REFERENCES	164


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALAM - 533 437

The Flexible AC Transmission System (FACTS) controllers play a vital role in power system security enhancement. However, due to high capital investment, it is necessary to place these controllers at optimal locations in the power system. This Thesis presents comparison of various methods used for optimizing the location of Thyristor Controlled Series Compensators (TCSC) and Thyristor Controlled Phase Angle Regulators (TCPAR), Unified Power Flow Controller (UPFC), Interline Power Flow Controller (IPFC), and Optimal Unified Power Flow Controller (OUPFC). Four indices obtained in this Thesis are, line loss sensitivity indices, total system loss sensitivity indices, real power flow performance index and ranking index. A generalized approach has been discussed for determination of optimal locations for placement of Flexible AC Transmission Systems (FACTS) devices in this book. The objective is to reduce real power loss and overloading of the lines in the Power system. An objective function is formulated and a detailed mathematical model is presented in terms of system parameters.

Dr. V. Srinivasa Rao obtained his Ph. D in November, 2016, from JNTUK, Kakinada, A.P. Presently he is working as Professor and Head of the department EEE in Aditya Engineering College(A), Surampalem, India. He has published various national and international journals. His areas of interest are Power Systems, Power Quality, FACTS and EVs.

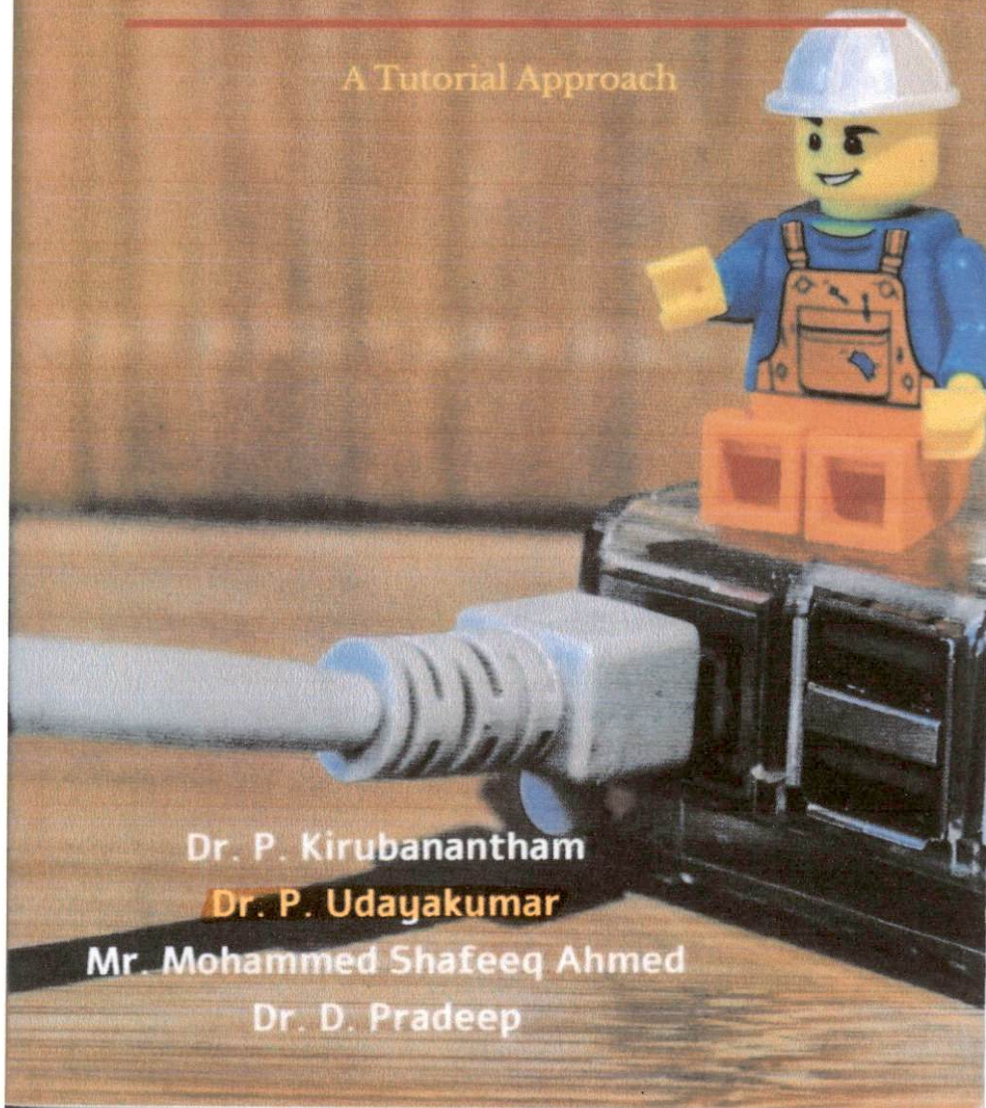


Sr. Gng.

PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

MicroPython for the Internet of Things

A Tutorial Approach



Dr. P. Kirubanantham

Dr. P. Udayakumar

Mr. Mohammed Shafeeq Ahmed

Dr. D. Pradeep

S. U. J.

PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALAM - 533 437

Contents

Chapter I

1.1. The Internet of Things and You	1
1.2. IOT Is More Than Just Connected to the Internet	2
1.3. IOT Services	3
1.4. A Brief Look at IOT Solutions	6
1.5. IOT and Security	19
1.6. Python and the IOT	24
1.7. Origins	25
1.8. Online Python Simulator	26

Chapter II

2.1. Introducing MicroPython	30
2.2. Getting Started	30
2.3. Origins	32
2.4. MicroPython Features	24
2.5. MicroPython Limitations	35
2.6. What Does MicroPython Run On?	36
2.7. Experimenting with Python on Your PC	37
2.8. How MicroPython Works	45
2.9. The Run, Evaluate, Print Loop (REPL Console)	46
2.10. Off and Running with MicroPython	53
2.11. Additional Hardware	55

Chapter III

3.1. MicroPython Hardware	60
3.2. Getting Started with MicroPython Boards	61
3.3. Firmware Updates	61
3.4. Networking Issues	62
3.5. One Step at a Time!	63
3.6. Programming Tools	64

3.7 Some Assembly Required	67
3.8 GPIO Pins	67
3.9 Other Tips	68
3.10 MicroPython-Ready Boards	75
3.11 Pyboard	75
3.12 WiPy	96
3.13 MicroPython-Compatible Boards	118
3.14 BBC micro:bit	119
3.15 Circuit Playground Express (Developer Edition)	123
3.16 Adafruit Feather Huzzah	130
3.17 Other Boards	137
3.18 Breakout Boards and Add-Ons	138
3.19 Breakout Boards	138

Chapter IV

4.1 Program in MicroPython	141
4.2 Basic Concepts	142
4.3 Code Blocks	143
4.4 Comments	145
4.5 Arithmetic	146
4.6 Output to Screen	147
4.7 Variables	149
4.8 Types	150
4.9 Basic Data Structures	151
4.10 Lists	151
4.11 Tuples	152
4.12 Dictionaries	152
4.13 Statements	153
4.14 Conditional Statements	153
4.15 Loops	154

Chapter V

5.1 MicroPython Libraries	156
5.2 Built-In and Standard Libraries	157
5.3 Common Standard Libraries	158
5.4 Built-In Functions and Classes	161
5.5 Exceptions	162
5.6 MicroPython Libraries	163
5.7 Overview	164
5.8 Common MicroPython Libraries	164
5.9 Custom Libraries	168

Chapter VI

6.1 Low-Level Hardware Support	174
6.2 Board-Specific Libraries	175
6.3 Pyboard	176
6.4 WiPy	192
6.5 Low-Level Examples	199
6.6 Drivers and Libraries to the Rescue!	200
6.7 Real-Time Clock (RTC)	203
6.8 Callbacks	206
6.9 Using Breakout Boards	210
6.10 Inter-Integrated Circuit (I2C)	211
6.11 Serial Peripheral Interface (SPI)	214

MicroPython for the Internet of Things

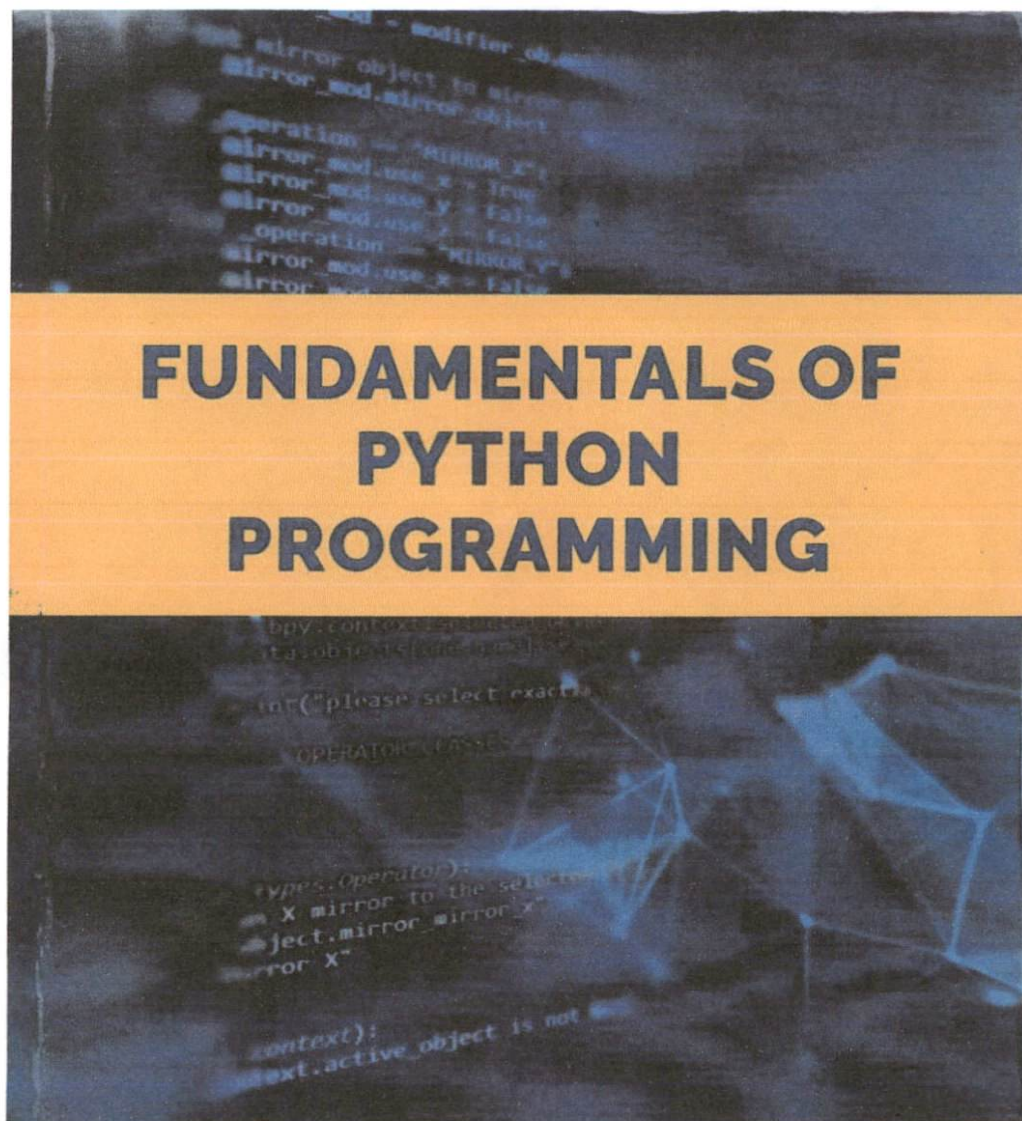
The book was written to guide the reader from a general knowledge of microcontrollers and MicroPython to expertise in developing MicroPython solutions for the IOT. The first several chapters cover general topics including a short introduction to the Internet of Things, what microcontroller boards are available as well as how MicroPython works. Later chapters present a tutorial on programming in MicroPython as well as an introduction to electronics. This is followed by four projects that you can implement to learn how to build MicroPython IOT solutions. Throughout the book are examples of how to implement many of the concepts presented.

Price Rs 260.00
ISBN 979-888503479-1



Singh

PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437



Dr. Korla Swaroopa
Mr.S.Venkatasubramanian
Dr. Mahendra Pratap Swain
Dr. Naveen N. Malvade



(Scientific International Publishing House)

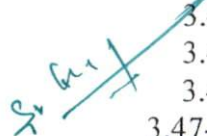
PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

Table of Contents

Unit No	Contents	Page No
1	Algorithmic Problem Solving	1.1
	1.1 Algorithm	1.1
	1.1.1 Basic building blocks of Algorithm	1.2
	1.1.1.1 Sequence Structure	1.2
	1.1.1.2 Selection Structure	1.3
	1.1.1.3 Iteration Structure	1.4
	1.2 Flow Chart	1.6
	1.2.1 Types	1.7
	1.2.1.1 High-Level Flowchart	1.7
	1.2.1.2 Detailed Flowchart	1.7
	1.2.1.3 Deployment or Matrix Flowchart	1.7
	1.3 PSEUDOCODE	1.11
	1.3.1 Three basic constructs for flow of control	1.11
	1.3.1.1 Sequence	1.11
	1.3.1.2 Selection	1.12
	1.3.1.3 Repetition	1.14
	1.3.2 Nested Constructs	1.17
	1.4 ILLUSTRATIVE PROBLEMS	1.19
	1.4.1-1.4.18 List of Programs	1.19-1.28
2	DATA, EXPRESSION, STATEMENTS	2.1
	2.1 Introduction: Python	2.1
	2.1.1 Values and Types	2.2
	2.1.1.1 Number data type	2.2
	2.1.1.2 String data type	2.3
	2.1.1.3 List data type	2.3
	2.1.1.4 Tuple data type	2.4
	2.1.1.5 Dictionary data type	2.5
	2.2 Variable	2.5
	2.3 Expression and Statements	2.6
	2.4 Comments	2.6
	2.5 Operators	2.7
	2.5.1 Types of Operator	2.7
	2.5.1.1 Arithmetic Operator	2.7
	2.5.1.2 Comparison (Relational) Operators	2.8
	2.5.1.3 Assignment Operators	2.9
	2.5.1.4 Logical Operators	2.11
	2.5.1.5 Bitwise Operators	2.12
	2.5.1.6 Membership Operators	2.13
	2.5.1.7 Identity Operators	2.14
	2.5.1.8 Unary arithmetic Operators	2.14
	2.5.2 Operator Precedence	2.15
	2.6 Functions	2.16
	2.6.1 Types of functions	2.16
	2.6.1.1 Built-in/Pre-defined function	2.16
	2.6.1.1.1 Type conversion functions	2.17
	2.6.1.1.2 Math functions	


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPalem - 533 437

	2.6.1.2 User defined function	2.20
	2.7 ILLUSTRATIVE PROGRAMS	2.24
	2.7.1 - 2.7.13 List of Programs	2.24-2.30
3	CONTROL FLOW,FUNCTIONS	3.1
	3.1 Boolean values and operators	3.1
	3.2 Conditional Execution	3.3
	3.2.1 Condition statement (if)	3.3
	3.2.2 if....else Statement	3.5
	3.2.3 Chained conditionals (if-else-if)	3.6
	3.2.4 Nested Conditionals	3.8
	3.3 Iteration	3.9
	3.3.2 Looping statements	3.11
	3.3.2.1 While loop	3.11
	3.3.2.2 For loop	3.12
	3.3.3 Loop control statements	3.18
	3.3.3.1 Break statement	3.18
	3.3.3.2 Continue statement	3.20
	3.3.3.3 Pass statement	3.21
	3.4 Variables and Scope	3.22
	3.4.1 Scope rules in function	3.23
	3.4.2 Stack Diagrams	3.26
	3.4.3 Fruitful functions	3.28
	3.4.4 Void Functions	3.28
	3.4.5 Importing modules	3.28
	3.4.6 Input from Keyboard	3.30
	3.4.6.1 The Input() function	3.30
	3.4.6.2 Input with raw_input()	3.30
	3.4.7 Incremental Development	3.31
	3.4.8 Function Composition	3.32
	3.4.9 Boolean Functions	3.33
	3.4.10 Recursion	3.34
	3.4.10.1 Stack diagram for recursive functions	3.35
	3.4.10.2 Infinite recursion	3.36
	3.5 Strings	3.37
	3.5.1 Subscript Operator	3.37
	3.5.2 Len function	3.38
	3.5.3 in operator	3.38
	3.5.4 String slice	3.38
	3.5.5 Immutability	3.39
	3.5.6 String methods	3.39
	3.5.7 String module	3.42
	3.6 Arrays	3.44
	3.6.1 Lists as arrays	3.45
	3.7 ILLUSTRATIVE PROGRAMS	3.47
	3.7.1-3.7.6 List of programs	3.47-3.53
4	COMPOUND DATA:LISTS,TUPLES,DICTIONARIES	4.1
	4.1 Lists	4.1
	4.1.1 Accessing elements in lists using subscript operator	4.1


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM 533 437

4.1.2 List operations	4.2
4.1.3 Lists slices	4.2
4.1.4 List methods	4.3
4.1.5 List loop	4.7
4.1.6 Mutability	4.9
4.1.7 Aliasing	4.9
4.1.8 Cloning Lists	4.11
4.1.9 List parameters	4.13
4.1.10 Deleting list elements	4.14
4.1.11 Python function : for list operation	4.15
4.1.12 List comprehension	4.16
4.2 TUPLES	4.18
4.2.1 Advantages of Tuple over list	4.18
4.2.2 Accessing values	4.20
4.2.3 Updating Tuples	4.21
4.2.4 Delete Tuple Elements	4.22
4.2.5 Tuple assignment	4.23
4.2.6 Tuple methods	4.25
4.2.7 Other Tuple Operation	4.26
4.2.8 Tuples as return values	4.26
4.2.9 Built in functions with Tuple	4.27
4.2.10 Variable length argument tuples	4.28
4.2.11 Comparing tuples	4.29
4.3 DICTIONARIES	4.30
4.3.1 Built in dictionary function & methods	4.32
4.3.2 Access, update and add elements in dictionary	4.33
4.3.3 Delete or remove elements from a dictionary	4.33
4.3.4 Sorting a dictionary	4.34
4.3.5 Iterating through a dictionary	4.35
4.3.6 Reverse lookup	4.35
4.3.7 Inverting a dictionary	4.36
4.3.8 Memoization	4.37
4.4 ILLUSTRATIVE PROGRAMS	4.38
4.4.1-4.4.6 List of programs	4.38-4.47
5 FILES,MODULES,PACKAGES	5.1
5.1 Files	5.1
5.1.1 Persistence	5.1
5.1.2 Reading and writing	5.1
5.1.3 Format operator	5.6
5.1.4 Filenames and path	5.11
5.2 Errors and Exception	5.12
5.2.1 Errors	5.12
5.2.2 Exceptions	5.14
5.2.2.1 Handling Exceptions	5.14
5.2.2.2 Raising Exceptions	5.14
5.2.2.3 The else and finally statements	5.14
5.2.2.4 User defined exceptions	5.20
5.3 Modules	5.21
5.3.1 Writing modules	5.24

S. G. S.
PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALAM - 533 437

Table of Contents

Chapter No	Contents	Page No
1	Object Oriented Programming Fundamentals	1
	1.1 Introduction	1
	1.1.1 Program	1
	1.1.2 Real Time Example	1
	1.1.3 Programming Language	1
	1.1.4 Types of programming languages	1
	1.1.4.1 Structured Programming Language	1
	1.1.4.2 Object Oriented Programming language	1
	1.1.5 Data Types in C++	2
	1.1.6 Variables	3
	1.1.6.1 Scope of variables	4
	1.1.6.2 Floating point literals	4
	1.1.6.3 Decision making statements	5
	1.1.7 Looping Statement	6
	1.1.8 C++ Features/OOPS Concept	7
	1.1.8.1 Class	8
	1.1.8.2 Object	8
	1.1.8.3 Encapsulation	8
	1.1.8.4 Data Abstraction	8
	1.1.8.5 Interface	8
	1.1.8.6 Polymorphism	9
	1.1.8.7 Inheritance	9
	1.1.8.8 Templates	9
	1.1.9 Objects and Class	10
	1.1.10 Access Specifier	11
	1.2 Data Abstraction	12
	1.2.1 Real time example of data abstraction	12
	1.3 Encapsulation	14
	1.3.1 General 3 ways to encapsulate data	14
	1.3.2 Advantage of Encapsulation	15
	1.4 Constructor	16
	1.4.1 Characteristics of Constructor	17
	1.4.2 Types of Constructors	17
	1.4.3 Destructor	19
	1.4.4 Constructor Overloading	20
	1.5 Static Members	21
	1.5.1 Properties of Static data members	21
	1.5.2 Properties of Static member function	21
	1.5.3 Static Member function	22
	1.6 Constant Members	24
	1.6.1 Constant Member function	25
	1.7 Member Function	25
	1.7.1 Outside the class definition	26
	1.7.2 Inside the class definition	26
	1.7.3 Different types of Member functions	26
	1.7.3.1 Simple member function	27
	1.7.3.2 Static member functions	27


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPalem - 533 437

1.7.3.3	Inline functions	27
1.7.3.4	Friend function	28
1.8	Pointers & References	28
1.8.1	Pointer to Constant	29
1.8.2	Pointer to class members	29
1.8.3	Constant Pointer	30
1.9	Role of this Pointer	31
1.9.1	Use of this pointer	31
1.10	C++ String Handling	32
1.10.1	The String Class in C++	34
1.11	Copy Constructor	34
1.12	Polymorphism	36
1.12.1	Definition	36
1.12.2	Compile time polymorphism	36
1.13	Function Overloading	36
1.14	Operator Overloading	37
1.14.1	How to use Operator Overloading	38
1.14.2	Overloading Restrictions	38
1.14.3	Operator Cannot be overloaded	38
1.15	Dynamic Memory Allocation	46
1.15.1	Stack of Activation Records	46
1.15.2	Delete Operator	46
1.15.3	Dynamic memory allocation for objects	46
2	Object Oriented Programming - Advanced Features	50
2.1	Generic Programming	50
2.2	Templates in C++	50
2.3	Function Templates	52
2.3.1	Template Specialization	52
2.4	Class Template	54
2.5	Inheritance	56
2.5.1	Types of Inheritance	56
2.5.1.1	Single Inheritance	56
2.5.1.2	Multiple Inheritance	57
2.5.1.3	Hierarchical Inheritance	60
2.5.1.4	Multilevel Inheritance	62
2.5.1.5	Hybrid Inheritance	64
2.6	Virtual Function	64
2.6.1	Rules of Virtual Function	65
2.7	Abstract Class	67
2.8	Exception Handling	73
2.8.1	What is Exception	73
2.8.2	What is Exception Handling	73
2.8.3	Standard Template	83
2.8.4	Character Handling Functions	85
2.9	Standard Template Library	90
2.9.1	Containers	91
2.9.2	Algorithms	91
2.9.3	Iterators	91
2.9.4	Containers	91
2.9.5	Derived Containers / Containers Adapter	93


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533437

	2.9.6 Associative Container	106
	2.9.7 Containers Adaptors	116
3	Hierarchical Data Structures	123
	3.1 Tree Introduction	123
	3.1.1 Binary Search Tree	126
	3.2 AVL Trees	133
	3.3 Red Black Tree	140
	3.3.1 Properties of Red Black Tree	140
	3.4 B Tree	144
	3.4.1 Operation on a B-Tree	144
	3.5 Splay Tree	150
	3.6 Binomial Tree	154
	3.6.1 Binomial Heap data structures	155
	3.6.2 Properties	155
	3.7 Leftist Heap	160
4	Elementary Graph Algorithms	164
	4.1 Graph	164
	4.1.1 Directed graph (or) Digraph	165
	4.2 Representation of Graph	168
	4.3 Graph Traversals	171
	4.3.1 Depth First Traversal	171
	4.3.2 Breadth First Search	180
	4.4 Topological Sort	182
	4.4.1 Algorithm to find topological sorting	182
	4.5 Shortest Path Algorithms	185
	4.6 Dijkstra's Algorithm	186
	4.6.1 Algorithm	186
	4.7 Single Source Shortest Paths	192
	4.8 Minimum Spanning Tree	192
	4.9 Prim's Algorithm	193
	4.10 Kruskal's Algorithm	198
5	Advanced STL in Sorting and Searching Technique	202
	5.1 Introduction to Sorting	202
	5.1.1 Bubble Sort	202
	5.1.2 Selection Sort	203
	5.1.3 Insertion Sort	204
	5.1.4 Quick Sort	206
	5.2 Introduction to Searching	210
	5.2.1 Linear Searching	210
	5.2.2 Binary Searching	211
	5.3 Illustrative Programs for C++ & Data Structures	214
	Laboratory	


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 522 407

AUTHORS PROFILE



Dr. Korla Swaroopa, Associate Professor in the Department of Computer Science & Engg., Aditya Engineering College, Surampalem, Andhra Pradesh. She obtained her Doctor Of Philosophy in Faculty Of Engg(CSE) from GITAM (Deemed to be University), Visakhapatnam in 2019. She did her postgraduate M.Tech (CSE) from RVR&JC College of Engineering-Acharya Nagarjuna University, Guntur in 2008, and she earned her undergraduate B.Tech(CSE) in Narasaraopeta Engineering College-JNTUH, Narasaraopet in 2005. She has more than 14 years of teaching, 8 years of research and one year of software industry experience. Her Research Interest includes Programming languages, Cloud Computing, Information Centric Networks, High Performance Computing. She has published more than seven reputed publications in International Journals including IJMNDI, Future Internet, IJAST to her credit, three conference publications, two National seminar and two Book Chapters in Springer-Book and Taylor Francis book chapter series. She also published two Indian Patents. She has received young researcher award in 2021 by Institute of scholars for her Future Internet journal which is in MDPI data base. She is professional associate member of ISTE, IAENG, AMIE & InSc.



Mr. S. Venkatasubramanian received the B.E. degree in Electronics and Communication from Bharathidasan University and M.E. degree in Computer science from Regional Engineering College, Trichy. He has 23 years of teaching experience. He is currently pursuing doctoral research in mobile Ad hoc networks. His areas of interest include mobile networks, Network Security and software Engineering. He has published 25 papers in the international journals, 10 papers in international conferences and filed 4 patents. At present he is working as Associate Professor in Department of CSE at Saranathan college of Engineering, Trichy, India. He has also authored books on "Software Engineering" and "Fundamentals of Mobile and pervasive Computing". He is also the recipient of Global teacher award by AKS New Delhi.



Dr. Mahendra Pratap Swain, has more than 6 years of industrial and academic research experience in formulation design and development. He is currently joined as National Doctoral Fellow (NDF-AICTE), at Birla Institute of Technology (BIT), Mesra, Ranchi. He did his research work in the field of formulation development and design, new drug delivery system (NDDS), abbreviated new drug application (ANDA), and In-silico approach (artificial intelligence) of the drug delivery system as well. He has various publications (Research and Review) and patents in the above disciplines.



Dr. Naveen N. Malvade, Malvade, Associate Professor in Department of Computer Science and Engineering, ATME College of Engineering, Mysuru. He earned his Ph.D. degree from Visvesvaraya Technological University, Belagavi, Karnataka in 2020. He has got 12 years of teaching experience. He also worked as Associate Software Engineer for 3 years from 2007 to 2009. He is a reviewer for some renowned international journals published by Elsevier. He has published more than 10 research papers in reputed international journals. His areas of interest include Computer Vision, Pattern Recognition, and Deep Learning.



(Scientific International Publishing House)

+91 7019991025 ✉ www.sipinternationalpublishers.com

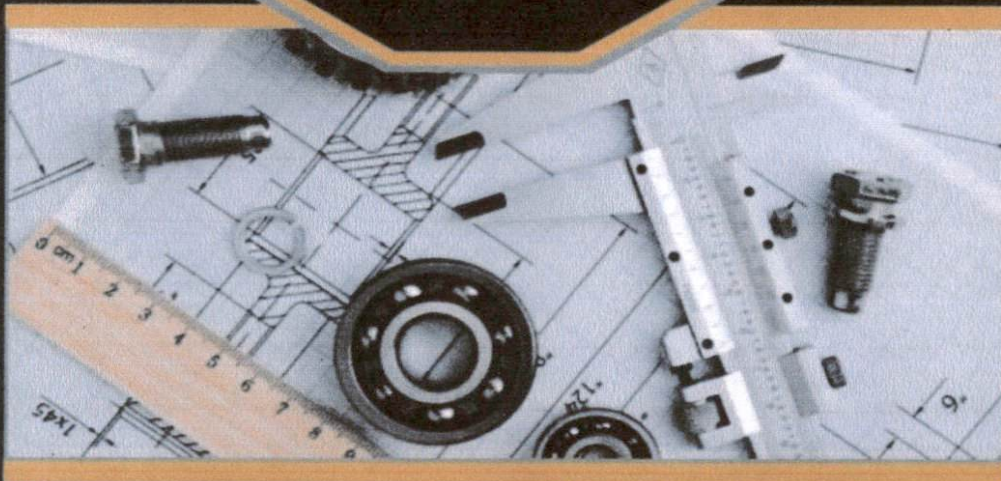
Dr. H. J.

PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

2021



EDITION



DEFINITIONS FOR **MECHANICAL ENGINEERING**

TEXTBOOK - VOLUME - I

Dr. MARY JASMIN NERELLA

Dr. V.V.KAMESH

Dr. RAM SUBBIAH

Dr. PRAMOD.V.R

Prof. AMOL MANGRULKAR



WWW.ROYALBOOKPUBLISHING.COM

S. S. S.
PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

Contents

Chapter NO	Table of Contents	Page No
1	Fluid Mechanics & Hydraulic Machines	01-23
2	Engineering Metrology & Measurements	24-41
3	Engineering Thermodynamics	42-65
4	Kinematics Of Machinery	66-83
5	Mechanics Of Solids	84-115
6	Manufacturing Technology	116-146
7	Automobile Engineering	147-170


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

About Authors



Dr. Mary Jasmin Merella Currently working as Associate Professor at Tirumala Engineering College, Narasaraopet. She received her B.E, M.E, in Mechanical Engineering from SRKREC, Andhra University, M.Tech in Computer Science and Engineering from VEC, JNTUK. She received her PhD degree in Mechanical Engineering from Andhra University, Visakhapatnam in 2019. She has more than 20 years of Teaching experience and worked in Reputed Institutions like Malleni Laxmaiah Engineering College, Singarayakonda as Assistant Professor from the year 2000-2009, KITS, Markapur as Associate Professor from the year 2010-2014, Teaching Assistant at Andhra University, Visakhapatnam from the year 2014-2019. She has guided various UG & PG Projects and her areas of interests are Manufacturing Engineering, Artificial Intelligence, Vibrations & Condition Monitoring. She holds her membership in ISTE & IEL.

Email : jasminmary2@gmail.com



Dr. V.V. KAMESH currently Working as Professor in Mechanical Engineering in Aditya Engineering College(A), Surampalem and has 19 years of teaching experience from the same college since 2002. He completed his Bachelor of Engineering (B.E) - Graduated from S.R.K.R. Engineering College, Bhimavaram, Affiliated to Andhra University (1997) in First Class with Distinction, Master of Business Administration (M.B.A) - Graduated from Andhra University (Distance Mode) in First Class (2001), Master of Technology in CAD/CAM from Nimra College of Engineering & Technology, Affiliated to JNTUK, Kakinada in First Class with Distinction (2009) , Ph.D from JNTUK, Kakinada in December 2017 the area of Machine Design. He has guided various UG & PG Projects and his area of interest includes Kinematics of Machinery, Operations Research.

Email : kameshvv@gmail.com



Dr. Ram Subbiah is currently working as Associate Professor, Department of Mechanical Engineering in Gokaraju Rangaraju Institute of Engineering & Technology, Hyderabad. He completed his Diploma in Mechanical Engineering (DME), Bachelor of Engineering (B.E) in Mechatronics Engineering, Master of Technology (M.Tech) in Computer Integrated Manufacturing as a Gold Medalist, Master of Business Administration (MBA) in Education Management. He carried out his research work at Indian Space Research Organization (ISRO) and completed his Ph.D from Singhania University, Pilani. Altogether by completing all the degrees by 29 years of age, he has 12 years of Academic/ Research experience and has published 25 Project Patents, More than 300 Research papers which includes National/ International -

Journals & Conferences. He received many awards for showing outstanding achievements in the field of Education and Research activities. His areas of specializations are Material Science - Surface Hardening Processes, Mechatronics and Automation.

Email: ram4msrm@gmail.com



Dr. Pramod V.R is currently working as Professor in Mechanical Engineering Department of NSS College of Engineering, Palakkad, India. He holds B.Tech in Mechanical Engineering, from University of Kerala, M.Tech in Maintenance Engineering and Management from IIT Madras and PhD in Supply Chain Management from IIT Delhi. He has seven years of industrial experience and twenty one years of teaching experience. He has published over 20 papers in the proceedings of the leading National and International Conferences. He has published 30 papers in International Journals. 6 research scholars have obtained Ph.D. degrees under his direct guidance. Four research scholars are currently pursuing

Ph.D. under his guidance. He has delivered several technical lectures in various kinds of podiums. His current areas of research interest include engineering education, supply chain management, telecom logistics and service management.

Email : pramodvram@gmail.com



Prof. Amol Mangrulkar is currently working as Assistant Professor in Mechanical Engineering department at MCT's Rajiv Gandhi Institute of Technology, Andheri (w), Mumbai. He is pursuing his Ph.D at present, completed his M.Tech from (CAD/CAM), PGDGS, B.E.(Mechanical Engineering). He has 27 Years of experience out of which 15 years from industry and 12 years in teaching. He worked with companies like Mahindra, Rolta, Zensar, JBF, ADCC etc. He has Published 10 technical papers 6 in journal and 4 in International conferences. He completed Oracle Certified Professional course(OCA) and his area of interest includes CAD/CAM/CAE/CIM/CFD, PLM, DFAM, DFM, DFA, VR/AR, AI & Industrial Automation, Bio-medical engg application. He got trained in Ansys Work bench, Pro-E, IDEAS, AutoDesk, Inventor,

Microstation, MetLab, ARGIS, Erdas, AutoCAD, AutoCAD MAP, Oracle, VB, J2EE etc. he holds membership in various professional Bodies Association of ASME, SAE, NSFMPF, IAENG, APML.

Email : a.mangrulkar@gmail.com

WWW.ROYALBOOKPUBLISHING.COM

Signature

PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

Globe
EDITION



Suryanarayana Veeravilli · Sambasiva Rao Krothapalli ·
Jahnvi Tatineni

Personalized Cancer Medicine

Strategies for predictive, preventive and
personalized medicine in cancer

S. G. V.

PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

CONTENTS

<i>Preface</i>	<i>i</i>
<i>Author Contribution's</i>	<i>ii</i>
<i>Abstract</i>	<i>iii</i>
1. INTRODUCTION	
1.1 Properties of cancer cells	2
1.2 Types of cancer	3
1.3 Causes of cancer	3
1.4 Role of immune system	3
2. TRENDS IN CANCER TREATMENT	
2.1 Surgery	5
2.2 Radiation therapy	6
2.3 Chemotherapy	6
2.4 Vaccines	7
3. TRENDS IN CANCER PREVENTION	
3.1 Alcohol	8
3.2 Tobacco	9
3.3 Diet & Obesity	10
3.4 Viruses and infectious agents	12
3.5 Occupational factors	13
3.6 Socioeconomic status	14
3.7 Sun exposure	15
3.8 Sedentary lifestyle	16

St. In
PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALAM - 533 437

3.9 Population changes in risk	18
3.10 Cancer vaccines	19
3.11 Monoclonal antibodies	24
3.12 Cytokines	25
3.13 Resveratrol	26
3.14 Retinoids	27
3.15 Nonsteroidal anti-inflammatory drugs	28
3.16 Tea	29
3.17 Statins	29
3.18 Vitamin D	30
3.19 Lycopene	31
3.20 Berry fruits	31
3.21 Ayurveda	33
3.22 Homeopathy	34
3.22 Unani	35
4. CONCLUSION	37
5. REFERENCES	39


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPalem - 533 437

Personalized Cancer Medicine

Cancer is a complex disease occurring as a result of a progressive accumulation of genetic aberrations and epigenetic changes that enable escape from normal cellular and environmental controls.

Over the past 20 years, technological advances in molecular biology have proven invaluable to the understanding of the pathogenesis of human cancer. The application of molecular technology to the study of cancer has not only led to advances in tumour diagnosis, but has also provided markers for the assessment of prognosis and disease progression. The mechanisms for controlling when and how a eukaryotic cell divides are fundamental to the biology of multicellular organisms. Abnormal regulation can provide a driver for disease processes, not the least, cancer.

The aim of this book is to provide an overview of the strategies in cancer prevention in as molecular and functional entities, together with both their involvement in different disease processes and their potential for pharmacological modulation.



Dr. Suryanarayana Veeravilli has background in the field of Environmental Sciences & Applied Microbiology and has 23 years of postdoctoral teaching & research experience. He as the main author conceived of the presented idea of work and involved in critical revision of the article and final approval & published over 72 papers in reputed journals.



978-613-9-42076-6

Globe
EDIT


PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPalem - 533 437

Innate responses of chicken antibodies towards malarial antigens

Immune responses

ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437

CONTENTS

S. No.	Title	Page No.
	List of figures	i
	List of tables	ii
	Abbreviations	iii
	Abstract	iv
1.0	INTRODUCTION	1
2.0	LITERATURE SURVEY	2
3.0	THEORETICAL ANALYSIS	4-26
	3.1 Immune System	4
	3.2 Immunoglobulin	9
	3.3 Antigens and Mosquito Antigens	21
	3.4 Antigen-Antibody Interactions	26
4.0	EXPERIMENTAL INVESTIGATIONS	32-34
	4.1 Isolation of IgY	32
	4.2 Purification Methods	32
	4.3 Characterization of Ig by SDS-PAGE	33
	4.4 Enzyme-linked immunosorbent assay	34
5.0	EXPERIMENTAL RESULTS AND DISCUSSION	36-
	5.1 Isolation of IgY	36
	5.2 Purification Methods	37
	5.3 Characterization of Ig by SDS-PAGE	37
	5.4 Enzyme-linked immunosorbent assay	38
6.0	CONCLUSION	46
7.0	REFERENCES	47
8.0	PUBLICATIONS	49


 PRINCIPAL
 ADITYA ENGINEERING COLLEGE
 SURAMPALEM - 533 437

Innate responses of chicken antibodies towards malarial antigens

Immunology grabbed a heavenly ground towards the aggregate of the nineteenth century, through smart developments in the examination of humoral cell security and prosperity. Insect borne maladies oversee mortality and serious dismalness around the world. Creepy Crawly the passenger as control of the populace depends principally on the utilization of bug spray, the rise of bug spray protection too to unintended outcomes of bug spray noteworthy difficulties to utilize perspective proceeded with their application.

This book discuss about the experimental method and results on inherent immunological activities of immunoglobulins towards low level infestation of malarial antigens. Monoclonal antibodies have been connected to the finding clinically and treatment of a variety of human issue, including malignancy and irresistible maladies, and have been utilized for the balance of insusceptible reactions. There is a pressing need for safe and effective monoclonal antibodies that have minimal side effects. However natural monoclonal antibodies production is highly recommended to overcome the significant side effects produced by the immune system.



Dr. Suryanarayana is Professor and Principal Investigator at Aditya Engineering College, India having 23 years of postdoctoral teaching and research experience. He is the key note speaker and Chair Person for Eurobiotechnology 23rd Congress, Switzerland. He has published over 72 papers in reputed journals and member of reputed scientific societies.



978-613-9-42044-5

Globe
EDIT

S. Anj
PRINCIPAL
ADITYA ENGINEERING COLLEGE
SURAMPALEM - 533 437