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ADVANCED WIRELESS NETWORKS

Cognitive, Cooperative and Opportunistic 4G Technology

Second Edition

Savo Glisic Beatriz Lorenzo

University of Oulu, Finland





Preface to the Second Edition

Contents

xix

1 Fund	amentals		1
1.1	4G Ne	tworks and Composite Radio Environment	1
1.2	Protoco	ol Boosters	7
	1.2.1	One-element error detection booster for UDP	9
	1.2.2	One-element ACK compression booster for TCP	9
	1.2.3	One-element congestion control booster for TCP	9
	1.2.4	One-element ARQ booster for TCP	9
	1.2.5	A forward erasure correction booster for IP or TCP	10
	1.2.6	Two-element jitter control booster for IP	10
	1.2.7	Two-element selective ARQ booster for IP or TCP	11
1.3	Green	Wireless Networks	11
	Refere	nces	11
2 Oppe	ortunistic	Communications	15
2.1	Multiu	ser Diversity	15
2.2	Propor	tional Fair Scheduling	16
2.3	Opport	tunistic Beamforming	19
2.4	Opport	tunistic Nulling in Cellular Systems	20
2.5	Netwo	rk Cooperation and Opportunistic Communications	22
	2.5.1	Performance example	25
2.6	Multiu	ser Diversity in Wireless Ad Hoc Networks	27
	2.6.1	Multiple-output and multiple-input link diversity	29
	2.6.2	Localized opportunistic transmission	30
	2.6.3	Multiuser diversity-driven clustering	31
	2.6.4	Opportunistic MAC with timeshare fairness	34
	2.6.5	CDF-based K-ary opportunistic splitting algorithm	34
	2.6.6	Throughput	37
	267	Ontimal opportunistic MAC	37

			ention resolution between clusters	38
			rmance examples	40
	2.7	-	ted Opportunistic Scheduling (MAOS)	46
			lity models	48
		-	nal MAOS algorithm	49
		•	otimum MAOS algorithm	51
			lity estimation and prediction	51
			ation of Lagrange multipliers	52
	20		rmance examples	52
	2.8		and Cooperative Cognitive Wireless Networks	53
			ystem model	53 57
			outage probability lar traffic shaping	58
			mobility modeling	59
			rbing Markov chain system model	61
			ighput analysis	62
			sion resolution	65
			rtunistic transmission with intercell interference awareness	65
		1.1	rmance examples	68
		References	mance examples	70
		References		70
3	Relay	ing and Mesh N	letworks	73
	3.1		egies in Cooperative Cellular Networks	73
			ystem model	73
		-	m optimization	75
		3.1.3 Relay	strategy selection optimization	79
			rmance example	84
	3.2	Mesh/Relay N		85
			ystem model	86
			ustive sleep	88
			ical applications	94
			rmance example	95
	3.3		Ad Hoc Relaying For Multicast	97
			ystem model	98
			discovery and route interference	99
			optimal multicast and approximations	101
			rmance examples	103
		References		107
4	Topol	ogy Control		113
	4.1	0.	m Spanning Tree (LMST) Topology Control	115
			s of MST topology control	115
			rmance examples	118
	4.2		Control, Resource Allocation and Routing	118
			l algorithm	121
	4.3	Fault-Tolerant		123
			system model	124
			tolerant topology design	124
			proximation algorithms	127
			rmance examples	132

				CONTENTS	ix
	4.4	Topolog	y Control in Directed Graphs		132
		4.4.1	The system model		133
		4.4.2	Minimum-weight-based algorithms		133
		4.4.3	Augmentation-based algorithms		135
		4.4.4	Performance examples		138
	4.5	Adjustab	ole Topology Control		138
		4.5.1	The system model		140
		4.5.2	The <i>r</i> -neighborhood graph		142
	4.6	Self-Cor	nfiguring Topologies		143
		4.6.1	SCT performance		145
		Reference	ces		148
5	Adapt	ive Medi	um Access Control		157
	5.1		Enhanced Distributed Coordination Function		157
	5.2	Adaptiv	e MAC for WLAN with Adaptive Antennas		160
		5.2.1	Description of the protocols		160
	5.3	MAC fo	or Wireless Sensor Networks		166
		5.3.1	S-MAC protocol design		167
		5.3.2	Periodic listen and sleep		168
		5.3.3	Collision avoidance		168
		5.3.4	Coordinated sleeping		169
		5.3.5	Choosing and maintaining schedules		169
		5.3.6	Maintaining synchronization		170
		5.3.7	Adaptive listening		170
		5.3.8	Overhearing avoidance and message passing		172
		5.3.9	Overhearing avoidance		172
	- 4	5.3.10	Message passing		172
	5.4		or Ad Hoc Networks		174
		5.4.1	Carrier sense wireless networks		176
		5.4.2 Referen	Interaction with upper layers		179 180
		Kelelell	ces		100
6	Teletra	affic Mod	deling and Analysis		183
	6.1	Channel	Holding Time in PCS Networks		183
		Referen	ces		191
7	Adapt	ive Netw	ork Layer		193
	_		and Routing Protocols		193
		7.1.1	Elementary concepts		193
		7.1.2	Directed graph		193
		7.1.3	Undirected graph		194
		7.1.4	Degree of a vertex		194
		7.1.5	Weighted graph		195
		7.1.6	Walks and paths		195
		7.1.7	Connected graphs		195
		7.1.8	Trees		196
		7.1.9	Spanning tree		197
		7.1.10	MST computation		199
	7.0	7.1.11	Shortest path spanning tree		201
	7.2	Graph 7	Theory		212

	7.3	_	with Topology Aggregation	214
	7.4		and Aggregation Models	215
		7.4.1	Line segment representation	217
		7.4.2	QoS-aware topology aggregation	220
		7.4.3	Mesh formation	220
		7.4.4	Star formation	221
		7.4.5	Line-segment routing algorithm	222
		7.4.6	Performance measure	224
		7.4.7	Performance example	225
		Referen	ces	228
8	Effect	ive Capa	city	235
	8.1	-	e Traffic Source Parameters	235
	0.1	8.1.1	Effective traffic source	237
		8.1.2	Shaping probability	238
		8.1.3	Shaping delay	238
		8.1.4		241
	8.2		Performance example	
	0.2		e Link Layer Capacity	243
		8.2.1 8.2.2	Link-layer channel model	244
			Effective capacity model of wireless channels	246
		8.2.3	Physical layer vs link-layer channel model	249
		8.2.4	Performance examples	251
		Referen	ces	254
9	Adapt	ive TCP	Layer	257
	9.1	Introduc		257
		9.1.1	A large bandwidth-delay product	258
		9.1.2	Buffer size	259
		9.1.3	Round-trip time	260
		9.1.4	Unfairness problem at the TCP layer	261
		9.1.5	Noncongestion losses	262
		9.1.6	End-to-end solutions	262
		9.1.7	Bandwidth asymmetry	263
	9.2		peration and Performance	264
). <u>_</u>	9.2.1	The TCP transmitter	264
		9.2.2	Retransmission timeout	265
		9.2.3	Window adaptation	265
		9.2.4	Packet loss recovery	265
		9.2.5	TCP-OldTahoe (timeout recovery)	265
		9.2.6	TCP-Tahoe (fast retransmit)	265
		9.2.7	TCP-Reno fast retransmit, fast (but conservative) recovery	265
		9.2.7	TCP-NewReno (fast retransmit, fast recovery)	266
		9.2.8	·	
			Spurious retransmissions	267
	0.2	9.2.10	Modeling of TCP operation	267
	9.3		Mobile Cellular Networks	268
		9.3.1	Improving TCP in mobile environments	269
		9.3.2	Mobile TCP design	270
		9.3.3	The SH-TCP client	272
		9.3.4	The M-TCP protocol	273
		9.3.5	Performance examples	275

	9.4	Random 9.4.1	Early Detection Gateways for Congestion Avoidance The RED algorithm	276 276
		9.4.2	Performance example	277
	9.5	TCP for	Mobile Ad Hoc Networks	280
		9.5.1	Effect of route recomputations	280
		9.5.2	Effect of network partitions	280
		9.5.3	Effect of multipath routing	280
		9.5.4	ATCP sublayer	281
		9.5.5	ATCP protocol design	282
		9.5.6	Performance examples	287
		Reference	ces	287
10	Netwo	rk Optin	nization Theory	289
	10.1	Introduc	rtion	289
	10.2	Layering	g as Optimization Decomposition	290
		10.2.1	TCP congestion control	290
		10.2.2	TCP Reno/RED	291
		10.2.3	TCP Vegas/Drop Tail	292
		10.2.4	Optimization of the MAC protocol	292
		10.2.5	Utility optimal MAC protocol/social optimum	295
	10.3	Crosslay	ver Optimization	298
		10.3.1	Congestion control and routing	298
		10.3.2	Congestion control and physical resource allocation	301
		10.3.3	Congestion and contention control	303
		10.3.4	Congestion control, routing and scheduling	306
	10.4	Optimiz	ation Problem Decomposition Methods	307
		10.4.1	Decoupling coupled constraints	307
		10.4.2	Dual decomposition of the basic NUM	308
		10.4.3	Coupling constraints	310
		10.4.4	Decoupling coupled objectives	310
		10.4.5	Alternative decompositions	313
		10.4.6	Application example of decomposition techniques to distributed	
			crosslayer optimization	315
	10.5		ation of Distributed Rate Allocation for Inelastic Utility Flows	319
		10.5.1	Nonconcave utility flows	319
		10.5.2	Capacity provisioning for convergence of the basic algorithm	322
	10.6		vex Optimization Problem in Network with QoS Provisioning	323
		10.6.1	The system model	323
		10.6.2	Solving the nonconvex optimization problem for joint congestion—contention control	325
	10.7	Ontimiz	eation of Layered Multicast by Using Integer and Dynamic Programming	326
	10.7	10.7.1	The system model	327
		10.7.2	Lagrangian relaxation for integer programs	329
		10.7.3	Group profit maximization by dynamic programming	329
	10.8		otimization in Time-Varying Channels	331
	20.0	10.8.1	The system model	331
		10.8.2	Dynamic control algorithm	332
	10.9		k Optimization by Geometric Programming	337
		10.9.1	Power control by geometric programming: high SNR	338
		10.9.2	Power control by geometric programming: low SNR	340
	10.10		heduling by Geometric Programming	340

			Optimization of OFDM system by GP Maximum weight matching scheduling by GP	344 344
			Opportunistic scheduling by GP	345
			Rescue scheduling by GP	345
		Referen		346
l l	Mobil	ity Mana	gement	351
	11.1	Introduc	tion	351
		11.1.1	Mobility management in cellular networks	353
		11.1.2	Location registration and call delivery in 4G	355
	11.2		Systems with Prioritized Handoff	374
			Channel assignment priority schemes	377
			Channel reservation – CR handoffs	377
			Channel reservation with queueing – CRQ handoffs	378
			Performance examples	382
	11.3		siding Time Distribution	383
	11.4	-	y Prediction in Pico- and MicroCellular Networks	388
		11.4.1	PST-QoS guarantees framework	390
		11.4.2	Most likely cluster model	391
		Append	ix: Distance Calculation in an Intermediate Cell	398 403
		Keteten		403
12			o Resource Management	407
	12.1		Assignment Schemes	407
		12.1.1	Different channel allocation schemes	409
		12.1.2	Fixed channel allocation	410
			Channel borrowing schemes	410
			Simple channel borrowing schemes	411
			Hybrid channel borrowing schemes	412
			Dynamic channel allocation	414
			Centralized DCA schemes	415
			Cell-based distributed DCA schemes	417
			Signal strength measurement-based distributed DCA schemes	419
			One-dimensional cellular systems	420 422
	12.2		Reuse partitioning (RUP) c Channel Allocation with SDMA	426
	12.2	12.2.1	Single-cell environment	426
		12.2.1	Resource allocation	430
		12.2.3	Performance examples	435
	12.3		Switched SDMA/TDMA Networks	435
	12.5	12.3.1	The system model	437
		12.3.2	Multibeam SDMA/TDMA capacity and slot allocation	439
		12.3.3	SDMA/TDMA slot allocation algorithms	441
		12.3.4	SDMA/TDMA performance examples	445
	12.4		OFDM Networks with Adaptive Data Rate	446
		12.4.1	The system model	446
		12.4.2	Resource allocation algorithm	448
		12.4.3	Impact of OFDM/SDMA system specifications on resource allocations	450
		12.4.4	Performance examples	453
	12.5	Intercell	Interference Concellation SD Separability	151

1

			CONTENTS	XIII
		12.5.1	Channel and callular system madel	455
		12.5.1	Channel and cellular system model	455
		12.5.2	Turbo space–time multiuser detection for intracell communications	457
		12.5.3	Multiuser detection in the presence of intercell interference	459
	12.6	12.5.4	Performance examples	460
	12.6		I Interference Avoidance in SDMA Systems	461
		12.6.1	The BOW scheme	467
		12.6.2	Generating beam-off sequences	468
	12.7	12.6.3	Constrained QRA-IA	468
	12.7		yer RRM	470
		12.7.1	The SRA protocol	471
	12.0	12.7.2	The ESRA protocol	473
	12.8		ce Allocation with Power Preassignment (RAPpA)	475
		12.8.1	Resource assignment protocol	476
	120	12.8.2	Analytical modeling of RAPpA	479
	12.9		ve and Cooperative Dynamic Radio Resource Allocation	484
		12.9.1	8	486
		12.9.2	, , , , , , , , , , , , , , , , , , , ,	488
		12.9.3	•	491
		12.9.4	Performance examples	492
			ix 12A: Power Control, CD Protocol, in the Presence of Fading	494
			lix 12B: Average Intercell Throughput	498
		Referen	ces	499
3	Ad He	oc Netwo	orks	505
	13.1	Routing	Protocols	505
		13.1.1		507
		13.1.2	Reactive protocols	512
	13.2	Hybrid	routing protocol	524
			Loop-back termination	526
			Early termination	527
		13.2.3	•	528
	13.3	Scalable	e Routing Strategies	531
		13.3.1		531
		13.3.2	* .	533
		13.3.3	FSR (fisheye routing) protocol	534
	13.4		th Routing	537
	13.5		ing Protocols	539
		13.5.1	Introduction	539
			Clustering algorithm	541
		13.5.3	Clustering with prediction	542
	13.6		g Schemes for Routing	549
		13.6.1	Cache management	549
	13.7		uted QoS Routing	558
		13.7.1	Wireless links reliability	558
		13.7.2	Routing	558
		13.7.3	Routing information	559
		13.7.4	Token-based routing	559
		13.7.4	Delay-constrained routing	560
		13.7.6	Tokens	561
		13.7.7	Forwarding the received tokens	562
		13.7.7	Bandwidth-constrained routing	562
		13.7.0	Danuwiuut-Constraineu routing	302

		13.7.9	Forwarding the received tickets	562
		13.7.10	Performance example	564
		Referenc	res	567
4	Sensor	Network	76	573
-		Introduct		573
	14.2		Networks Parameters	575
	17.2		Pre-deployment and deployment phase	576
			Post-deployment phase	576
			Re-deployment of additional nodes phase	577
	14.3		networks architecture	577
			Physical layer	578
			Data link layer	578
			Network layer	581
			Transport layer	585
			Application layer	586
	14.4		Sensor Networks Deployment	587
	14.5		Diffusion	590
		14.5.1	Data propagation	591
			Reinforcement	593
	14.6	Aggrega	tion in Wireless Sensor Networks	593
	14.7	Boundar	y Estimation	596
		14.7.1	Number of RDPs in P	598
		14.7.2	Kraft inequality	598
		14.7.3	Upper bounds on achievable accuracy	599
		14.7.4	System optimization	600
	14.8	Optimal	Transmission Radius in Sensor Networks	602
		14.8.1	Back-off phenomenon	606
	14.9	Data Fu	nneling	607
	14.10	Equivale	ent Transport Control Protocol in Sensor Networks	610
		Reference	ces	613
15	Securi	tv		623
	15.1	Authenti	ication	623
		15.1.1	Attacks on simple cryptographic authentication	625
		15.1.2	Canonical authentication protocol	629
	15.2	Security	Architecture	631
	15.3	Key Ma	nagement	635
		15.3.1	Encipherment	637
		15.3.2	Modification detection codes	637
		15.3.3	Replay detection codes	637
		15.3.4	Proof of knowledge of a key	637
		15.3.5	Point-to-point key distribution	638
	15.4		management in GSM networks	639
	15.5		management in UMTS	643
	15.6		architecture for UMTS/WLAN Interworking	645
	15.7	Security	in Ad Hoc Networks	647
		15.7.1	Self-organized key management	651
	15.8		in Sensor Networks	652
		Reference	ces	654

			CONTENTS	χv
16	Active	Networks		659
	16.1	Introduction		659
	16.2	Programable Networks Reference Models		661
	10.2	16.2.1 IETF ForCES		662
		16.2.2 Active networks reference architecture		662
	16.3	Evolution to 4G Wireless Networks		665
	16.4	Programmable 4G Mobile Network Architecture		667
	16.5	Cognitive Packet Networks		670
		16.5.1 Adaptation by cognitive packets		672
		16.5.2 The random neural networks-based algorithms		673
	16.6	Game Theory Models in Cognitive Radio Networks		675
		16.6.1 Cognitive radio networks as a game		678
	16.7	Biologically Inspired Networks		682
		16.7.1 Bio-analogies		682
		16.7.2 Bionet architecture		684
		References		686
17	Netwo	rk Deployment		693
	17.1	Cellular Systems with Overlapping Coverage		693
	17.2	Imbedded Microcell in CDMA Macrocell Network		698
		17.2.1 Macrocell and microcell link budget		699
		17.2.2 Performance example		702
	17.3	Multitier Wireless Cellular Networks		703
		17.3.1 The network model		704
		17.3.2 Performance example		708
	17.4	Local Multipoint Distribution Service		709
		17.4.1 Interference estimations		711
		17.4.2 Alternating polarization		711
	17.5	Self-Organization in 4G Networks		713
		17.5.1 Motivation		713
		17.5.2 Networks self-organizing technologies		715
		References		717
18	Netwo	rk Management		721
	18.1	The Simple Network Management Protocol		721
	18.2	Distributed Network Management		725
	18.3	Mobile Agent-Based Network Management		726
		18.3.1 Mobile agent platform		728
		18.3.2 Mobile agents in multioperator networks		728
		18.3.3 Integration of routing algorithm and mobile agents		730
	18.4	Ad Hoc Network Management		735
		18.4.1 Heterogeneous environments		735
		18.4.2 Time varying topology		735
		18.4.3 Energy constraints		736
		18.4.4 Network partitioning		736
		18.4.5 Variation of signal quality		736
		18.4.6 Eavesdropping		736
		18.4.7 Ad hoc network management protocol functions		736
		18.4.8 ANMP architecture		738
		References		743

19	Netwo	rk Inform	mation Theory	747
	19.1		e Capacity of Advanced Cellular Networks	747
		19.1.1	4G cellular network system model	749
		19.1.2	The received signal	750
		19.1.3	Multipath channel: near-far effect and power control	752
		19.1.4	Multipath channel: pointer tracking error, rake receiver and interference	
			canceling	753
		19.1.5	Interference canceler modeling: nonlinear multiuser detectors	755
		19.1.6	Approximations	757
		19.1.7	Outage probability	757
	19.2	Capacity	y of Ad Hoc Networks	761
		19.2.1	Arbitrary networks	762
		19.2.2	Random networks	764
		19.2.3	Arbitrary networks: an upper bound on transport capacity	765
		19.2.4	Arbitrary networks: lower bound on transport capacity	768
		19.2.5	Random networks: lower bound on throughput capacity	769
	19.3	Informa	tion Theory and Network Architectures	773
		19.3.1	Network architecture	773
		19.3.2	Definition of feasible rate vectors	775
		19.3.3	The transport capacity	776
		19.3.4	Upper bounds under high attenuation	776
		19.3.5	Multihop and feasible lower bounds under high attenuation	777
		19.3.6	The low-attenuation regime	778
		19.3.7	The Gaussian multiple-relay channel	779
	19.4	Coopera	ative Transmission in Wireless Multihop Ad Hoc Networks	780
		19.4.1	Transmission strategy and error propagation	783
		19.4.2	OLA flooding algorithm	784
		19.4.3	Simulation environment	784
	19.5	Networ	k Coding	787
		19.5.1	Max-flow min-cut theorem (mfmcT)	788
		19.5.2	Achieving the max-flow bound through a generic LCM	789
		19.5.3	The transmission scheme associated with an LCM	792
		19.5.4	Memoryless communication network	793
		19.5.5	Network with memory	794
		19.5.6	Construction of a generic LCM on an acyclic network	794
		19.5.7	Time-invariant LCM and heuristic construction	795
	19.6	-	y of Wireless Networks Using MIMO Technology	798
		19.6.1	Capacity metrics	800
	19.7	Capacit	y of Sensor Networks with Many-to-One Transmissions	805
		19.7.1	Network architecture	805
		19.7.2		807
		Referen	nces	809
20	Energ	y-efficie	nt Wireless Networks	813
	20.1	Energy	Cost Function	813
	20.2		ım Energy Routing	815
	20.3	Maxim	izing Network Lifetime	816
	20.4	Energy-	-efficient MAC in Sensor Networks	821
		20.4.1	Staggered wakeup schedule	821
		Referer	nces	823

				CONTENTS	xvii
21	Qualii		vice Management		827
	21.1	Blind Q	OS Assessment System		827
		21.1.1	System modeling		829
	21.2	QoS Pr	ovisioning in WLAN		831
		21.2.1	Contention-based multipolling		831
		21.2.2	Polling efficiency		832
	21.3	Dynami	ic Scheduling on RLC/MAC Layer		835
		21.3.1	DSMC functional blocks		837
		21.3.2	Calculating the high service rate		838
		21.3.3	Heading-block delay		840
		21.3.4	Interference model		841
		21.3.5	Normal delay of a newly arrived block		841
		21.3.6	High service rate of a session		842
	21.4	OoS in	OFDMA-Based Broadband Wireless Access Systems		842
		21.4.1	Iterative solution		846
		21.4.2	Resource allocation to maximize capacity		848
	21.5	Predicti	ve Flow Control and QoS		849
		21.5.1	Predictive flow control model		850
		Referen			854
					55 .
Ind	lex				859



COGNITIVE, COOPERATIVE AND OPPORTUNISTIC 4G TECHNOLOGY

ADVANCED WIRELESS NETWORKS

SECOND EDITION

SAVO GLISIC AND BEATRIZ LORENZO

UNIVERSITY OF OULU, FINLAND

With 40% new material the new edition of *Advanced Wireless Networks* provides a comprehensive representation of the key issues in 4G wireless networks. Focussing on cognitive, cooperative and opportunistic paradigms to provide further increase in network efficiency, the book explores and addresses issues in wireless internet, mobile cellular and WLAN, as well as sensor, ad hoc, bio-inspired, active and cognitive networks. It examines the problem of cross-layer optimisation and network information theory as well as adaptability and reconfigurability in wireless networks. This book is an integral description of future wireless networks and the interconnection between their elements.

The information is presented in a logical order within each chapter making it ideal for all levels of reader including researchers involved in modelling and analysis of future networks as well as engineers working in the area. Each chapter starts with introductory material and gradually includes more sophisticated models and mathematical tools concluding with a comprehensive list of references.

- Fully updated throughout with five new chapters on Opportunistic Communications; Relaying and Mesh Networks; Topology Control; Network Optimization; and Cognitive Radio Resource Management
- Unifies the latest research on cognitive, cooperative and opportunistic paradigms in wireless communications
- · Provides efficient analytical tools for network analysis
- · Discusses security issues, an essential element of working with wireless networks
- Supports advanced university and training courses in the field
- Companion website containing extra appendix on Queuing theory

Companion Website

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