SOUTH FLORIDA

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING COMMUNICATION, NETWORKING, AND SIGNAL PROCESSING

Just as the ability to communicate effectively set humans apart from other species, the ability to design and implement the cutting-edge communication technologies set us apart from other engineers. In every aspect of modern life, from calling your friends for tonight's dinner plans to e-mailing your professor your homework assignment, from listening to orchestral quality music on your noise-cancellation wireless earphones to asking Siri what the weather looks like tomorrow, we consistently rely on the state-of-the-art platforms built by electrical engineers specializing in communications, networking, and signal processing. With graduate education, you will be in the front lines of research and development of the next line of evolutionary technologies such as 5G /6G, brain computer interface, cyber physical systems, Internet-of-Things (IoT), telemedicine, and bioengineering.

Dr. Huseyin Arslan Professor Research Wireless Communication: 5G and beyond, physical layer security, interference management



Dr. Morris Chang Professor Research Computer and Wireless Networking

Dr. Kwang-Cheng Chen Professor Research Communication Networks: Internet of Things, Cyber-Physical Systems and Edge Computing, 5G Mobile Communications and Beyond, Ad Hoc Sensor Networking



Dr. Nasir Ghani Professor Research Networking, Cloud Computing, and Cyber-Physical Systems



Dr. Ravi Sankar

Professor

Dr. Salvatore D. Morgera Professor

Research

Research Bioengineering, Signal Processing and Wireless Networks



Associate Professor

Dr. Mahshid Rahnamay Naeini Assistant Professor Research Network Science, System Modeling, Network Mining, Analytics,

Dr. Ismail Uysal Appl

Research

Applications of wireless and RFID technologies, algorithm design and machine learning for different Internet -of-Things (IoT) ecosystems





Wireless Networking, Signal Processing

Technologies for Advancing Health Care

and its Applications, Wearable Smart

Dr. Yasin Yilmaz Assistant Professor Research

machine learning and statistical signal processing with applications in cybersecurity, big data, IoT, social systems, smart grid, smart city, intelligent transportation systems, autonomous

COMMUNICATION, NETWORKING, AND SIGNAL PROCESSING TRACK* OPTIONS MASTER OF SCIENCE IN ELECTRICAL ENGINEERING (MSEE)

Curriculum Program of Study Co-Advisors: Drs. R. Sankar and I. Uysal

		ω	EEL 6729	ng	Rapid System Prototypii
		ω	EEL 6728		Introduction to VHDL
		ω	EEL 6935		Embedded Systems
					B. Digital Design
		ω	EEE 6282	d Pattern Recognition #	Biomedical Systems and
		ω	EEE 6514	essing	Biomedical Image Proce
		3	EEL 6753	g III #	Digital Signal Processing
		з	EEL 7931	munications #	Selected Topics in Comr
		ω	EEL 6935	S	Advanced Data Analytic
		ω	EEL 6935		Network Science
-	g	chine Learnii	sing, and Ma	etworking, Signal Proces	A. Communications, No
					4. Electives: 3-6 hours
		ω	EEL 6722C	Lab (DSP/FPGA Lab)	Real-Time DSP Systems
		ω	EEL 6777		Data Analytics
		ω	EEL 6935		Deep Learning
		ω	EEE 6586	9	Speech Signal Processin
		ω	EEL 6752	g II	Digital Signal Processing
		ω	EEE 6502	9	Digital Signal Processing
		_		id Machine Learning	B. Signal Processing an
		ω	EEL 6592	ons Lab	Wireless Communicatio
		ω	EEL 6597	itectures and Protocols	Wireless Network Archi
		ω	EEL 6935	rks	Wireless Sensor Networ
		3	EEL 6506	ition Networks	Broadband Communica
		ω	EEL 6593	mmunication	Mobile and Personal Co
		ω	EEL 6534	Systems	Digital Communication :
				d Networking	A. Communications an
ry area of	hours) and a seconda	zation (min 6	ea of specializ eas A and B	hours) from the focus an	3. Focus Area Core Cou specialization (min 6
		2	EEL 6029		Statistical Inference
		2	EEL 6020		Applied Optimization
		ollowing)	ne from the f	Core: 2 hours (select or	2. Math Concentration
		2	EEL 6029	ebra	Linear and Matrix Alg
		2	EEE 6542	ectrical Engineering	Random Process in Ele
				: 4 hours (both required	1. Math Common Core
Grade	Semester	Credits	Number	Title	Course
rning	e) and Machine Lea	edical/Imag	beech/Biome	al Signal Processing (S	Digita
	ns), Networking,	mmunicatio	Wireless Cor	nunications (Systems/	Areas of focus: Comm
					Advisor
					Email
					Phone
					I erm/Year Admitted
	ISF ID #				Name

	I core courses in mathematics (6 hours), , (3) others selected from the electives al of the option advisors if there is any	1) genera A and B) d approv	n to include: (: s from groups the advice an	 Non-Thesis Option: Design your course program (2) core courses from the focus areas (18 hour or independent study/project (6 hours). Seek
	e courses in mathematics (o nours), (2) from group A and B), (3) others selected Seek advice and approval of your thesis	6 hours).	r thesis topic (and (4) thesis (Inests Option: Jesign your course program to core courses from the focus areas based on you from the core, electives or independent study, a or the option advisors.
		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		COURSE STUDY PLAN RECOMMENDATIONS:
	Total Credits (30 required)			and instructors are subject to change.
	Total Credits Independent Study		as are offered	transcripts or diplomas. # Courses relevant to track but semesters these course
	Total Credits Outside of Dept.		w on	* Tracks are for student benefit only. They will not she
			EEL 6908	courses (combination of electives or Independent Study/Project).
		6		Non-Thesis Option: 6 hours of additional
-		6	EEL 6971	Thesis Option: 6 hours
	-			4. Thesis/Non-Thesis (Course Work) Options:
		З	CAP 5771	Data Mining #
		З	COT 6405	Introduction to Theory of Algorithms #
		з	MAD 5305	Algebraic Graph Theory #
		ω	STA 6876	Time Series Analysis #
		3	EEL 6630	Digital Control Systems #
		ω	EEL 6936	Digital Control Theory
		3	EEL 6614	Systems and Control Theory #
		ω	EEE 6217	Biomedical Optical Spectroscopy and Imaging
		3	EEL 6426	RF & MW Circuits I #
		з	EEL 6463	Advanced Antenna Theory
		З	EEL 5462	Antenna Theory #
		з	EEL 6935	Wireless Mobile Computing and Security #
		3	EEL 6935	Cryptography and Data Security #
		з	EEL 6787	Data Networks, Systems, and Security
·			mited to)	A. Interdisciplinary (Courses include, but not li
		ω	EEL 6357	Analog CMOS/VLSI Design
		ω	EEE 6412	System on a Chip
			-	

- deviation to the approved plan.
- Design your own study-plan for interdisciplinary program (combining courses from another track such as WAMI to fulfill Wireless Certificate requirements) or if the above recommendations do not meet your goals. This must be pre-approved by the option advisors and/or the graduate program coordinator.

 If any of the elective courses are from outside the EE department, seek pre-approval by the option advisors and/or the graduate program coordinator).

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