

Clemson University Libraries

Electrical and Computer Engineering Information Access Policy

Engineering Librarian:
Jan Comfort

Written by J. Comfort 5/10

Electrical engineering is a field of engineering that generally deals with the study and application of electricity electronics and electromagnetism. The field first became an identifiable occupation in the late nineteenth century after commercialization of the electric telegraph and electrical power supply. It now covers a range of subtopics including power, electronics, control systems, signal processing and telecommunications.

Computer Engineering (also called Electrical and Computer Engineering) is a discipline that combines both electrical engineering and computer science. Computer engineers usually have training in electronic engineering, software design and hardware-software integration instead of only software engineering or electronic engineering. Computer engineers are involved in many aspects of computing, from the design of individual microprocessors, personal computers, and supercomputers to circuit design. This field of engineering not only focuses on how computer systems themselves work, but also how they integrate into the larger picture. (from Wikipedia)

The Holcombe Department of Electrical and Computer Engineering can trace its roots back to the beginnings of Clemson University, as more than half of the first graduating class received degrees in mechanical-electrical engineering in 1896. One of the oldest engineering departments at Clemson University, the department was formed in 1933, adding a graduate degree program in electrical engineering in 1948, and awarding its first doctoral degree in 1967.

The department is now one of the largest and most active at Clemson, with over 40 faculty members who teach and perform research in a broad range of topics in Electrical Engineering and Computer Engineering. Many members of our faculty are known nationally and internationally, and among the ranks are several IEEE Fellows, two endowed chairs, and seven named professorships. In addition, several young faculty members have recently won prestigious national and international awards and grants. Many alumni have reached the highest levels of professional achievement. The 2009/10 student body currently numbers approximately 375 undergraduates and 140 graduate students, of whom 65 are Ph.D. candidates. The department offers a rich curriculum which comprises more than 60 undergraduate courses and 80 graduate courses. The ratio of students to faculty is low, and the faculty are proud of the Clemson tradition of close interaction among faculty and students.

Our faculty and graduate students are involved in diverse and challenging research projects, and the department has been the recipient of a number of grant awards from highly prestigious and selective national research programs. Our research activities are conducted in fully-equipped laboratories, many of which are housed in the state-of-the-art Fluor Daniel Engineering Innovation Building. Current research encompasses a wide spectrum of activities in the general areas of communications, electronics, computer architecture, and intelligent systems. (from the ECE website and brochure)

Overview of the Undergraduate Program

<http://www.ece.clemson.edu/ece/index.shtml>

The Undergraduate Program

Students may pursue B.S. degrees in either electrical or computer engineering. Both programs are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET), which has defined the curricular objectives of an engineering education. Accordingly, undergraduates are prepared to demonstrate:

- A capability to delineate and solve, in a practical way, the problems of society that are susceptible to engineering treatment
- A sensitivity to the socially related technical problems that confront the profession
- An awareness of the ethical characteristics of the engineering profession and practice
- Knowledge of the engineer's responsibility to protect safety and occupational and public health
- An ability to maintain professional competence through lifelong learning.

Bachelor of Science – Computer Engineering

Computer engineers have excellent career opportunities in the design and application of hardware and software components for a variety of computer applications. These include mainframe, desktop, and embedded microprocessor platforms as well as the networking of various types of computers and peripherals. Based on a strong foundation in mathematics, computer science, and the physical sciences, the Computer Engineering program includes engineering science and design in circuits, electronics, computer organizations and design, peripheral interfacing, and software engineering. Emphasis is placed on hands-on experience with networked computer systems, micro-, mini-, and mainframe computers, and the solution of a wide range of practical problems, using engineering principles. In addition to these technical skills, students learn to communicate effectively and to develop interpersonal, teamwork, and management skills, all of which contribute to success in a professional engineering career. The program is also an excellent preparation for graduate study.

Bachelor of Science – Electrical Engineering

Electrical engineers are in high demand for a wide range of influential positions. Professional duties range from analytical problem solving to the design of components and systems. The scope of employment requires a unique breadth and depth of knowledge and technical skills, which are reflected in the EE program, which also offers an excellent preparation for graduate education.

Building on a foundation of mathematical and physical sciences, students progress into the application of these in the engineering science areas of circuits, electronics, communications, controls, power, and electromagnetics. In these subjects, students also begin to apply the concepts and techniques learned to the design of circuits and systems. Senior technical design courses offer the opportunity to further develop expertise in a selected area.

In addition to these technical skills, students learn to communicate effectively, both orally and with the written word. Because engineers work for the benefit of society, the curriculum includes a strong component of humanities and social science courses. Also, many project design assignments enable the development of interpersonal, teamwork, and management skills which are necessary for success in a professional engineering career. (From the undergraduate announcements)

Overview of the Graduate Program

<http://www.clemson.edu/ces/departments/ece/grad/>

The Electrical and Computer Engineering department offers M.S. and Ph.D. degrees in both Electrical Engineering and Computer Engineering. In addition, there is a Master of Engineering (M. Engr) degree program in Electrical Engineering available to off-campus students. The Ph.D. program includes a direct-entry option for suitably qualified students having completed a baccalaureate degree.

The research activities of the Holcombe Department of Electrical and Computer Engineering are clustered into the four major areas of communications, electronics, computer systems architecture, and intelligent systems.

Master of Science

Computer Engineering

The Computer Engineering program is a combination of computer software, hardware, systems and applications. Areas of specialization include computer systems architecture, communication networks, digital signal processing and intelligent systems. Enrollment is open to graduates in any branch of engineering, computer science, or applied mathematics who have an appropriate engineering and/or science background.

Electrical Engineering

Students in Electrical Engineering may direct their programs toward the fields of communication systems and networks, digital signal processing, intelligent systems, applied electromagnetics, electronics, or power systems.

For the MS program, students may write a thesis or follow a nonthesis option. The thesis option requires a total of 30 credit hours including six hours of thesis research. For the nonthesis option, 33 credit hours of coursework must be completed.

Master of Engineering

Electrical Engineering

The Master of Engineering is a special degree offered for off-campus students through the University tele-campus program. Degree requirements include 24 credit hours of coursework and six hours of credit for an engineering report. Additional information is available from the Office of Off-Campus, Distance and Continuing Education.

Doctor of Philosophy

Computer Engineering

Electrical Engineering

The PhD degree requires at least 24 credit hours of graduate coursework beyond the master's degree. Specially qualified candidates with a BS degree may apply for direct entry to the PhD program in any of the above areas. The program of study and hours required beyond the baccalaureate degree are specified by the focus area but must be at least 66 hours including coursework and research credit.

See Appendix 1 for a list of Graduate Courses and Appendix 2 for a list of Undergraduate Courses

Research Activities

The research activities of the Holcombe Department of Electrical and Computer Engineering are clustered into four major areas:

Communications - The communications research focus area includes the wireless communications program, applied electromagnetics, computer networks, and digital signal processing.

Communications Faculty - [Carl W. Baum](#), [Chalmers M. Butler](#), [John N. Gowdy](#), [Stephen J. Hubbard](#), [Todd Hubing](#), [John J. Komo](#), [Anthony Q. Martin](#), [Daniel L. Noneaker](#), [L. Wilson Pearson](#), [Michael B. Pursley](#), [Harlan B. Russell](#), [Robert W. Snelsire](#), [Kuang-Ching Wang](#), and [Xiao-Bang Xu](#).

Electronics - The electronics group has active research projects in the areas of nanoelectronic materials processing, solid state device modeling, solar cells, bio chips, power electronics, plasma displays, flexible electronics, nanophotonics, integrated optics, semiconductor lasers, optical systems, microwave circuits and integrated circuit design.

Electronics Faculty - [John Ballato](#), [Michael A. Bridgwood](#), [E.R. "Randy" Collins](#), [W. Rod Harrell](#), [James E. Harriss](#), [Todd Hubing](#), [Sung-O Kim](#), [Kelvin F. Poole](#), [Rajendra Singh](#), [Pingshan Wang](#), and [Lin Zhu](#).

Computer Systems - The computer systems focus area includes computer architecture, high performance computing, computer security, penetration testing, system audit and monitoring, reconfigurable computing, embedded systems, and software engineering.

Computer Systems Faculty - [Nathan Bohlmann](#), [Jim Bottum](#), [Richard R. Brooks](#), [Jill Gemmill](#), [Adam W. Hoover](#), [Walter B. Ligon III](#), [William J. Reid III](#), [Robert J. Schalkoff](#), [Haiying \(Helen\) Shen](#), [Melissa C. Smith](#), [Barr von Oehsen](#), and [David White](#).

Intelligent Systems - The intelligent systems group has active research projects in the areas of computer vision, sensor fusion, sensor networks, robotics, image processing, nonlinear estimation & control, biological modeling, bioprinting, autonomous air, ground and water vehicles, situation and threat assessment, and power systems.

Intelligent Systems Faculty - [Stanley T. Birchfield](#), [Richard R. Brooks](#), [Karen Burg](#), [Timothy C. Burg](#), [Darren M. Dawson](#), [Adly A. Girgis](#), [Keith Green](#), [Richard E. Groff](#), [Adam W. Hoover](#), [Emeka Maduiké](#), [Elham B. Makram](#), [Robert J. Schalkoff](#), [Joachim Taiber](#), [Ian D. Walker](#), and [Guigen Zhang](#).

College of Engineering and Science Centers, Alliances, and Affiliated Institutes

Research and innovation continue to be driving factors as Clemson University climbs in the *U.S. News & World Report* rankings. With advanced technology and state-of-the-art laboratories, Clemson provides an environment where researchers and industry professionals can come together to create ideas for the future.

For years, Clemson has created and nurtured research and economic development centers to build a knowledge-based economy. Clemson's more than 100 centers and institutes are dedicated to everything from automotive excellence to advanced materials, from international diversity to community outreach, from ethics to the arts. The link between academics and industry grows stronger every day.

See Appendix 3 for a list of Centers, Alliances, and Affiliated Institutes in the College of Engineering and Science.

Clemson University Emphasis Areas

<http://www.clemson.edu/administration/provost/emphasisareas.bbsea.html>

Instead of assigning all of the financial resources to departments and colleges, Clemson instead focuses on programmatic areas that provide interdisciplinary research and service venues, unique platforms for enhanced scholarship, and more opportunities for graduate and undergraduate students. Clemson University has identified eight emphasis areas, which are the foundation for the Academic Plan. The College of Engineering and Sciences has a stake in five of these emphasis areas.

- Advanced Materials *
- Automotive and Transportation Technology *
- Biotechnology and Biomedical Sciences *
- General Education
- Family and Community Living
- Information and Communication Technology
- Leadership and Entrepreneurship
- Sustainable Environment

*Several collections have been purchased to particularly support these Emphasis areas: Historical files in Engineering Village, and the Referex collection of e-books (Elsevier) for Advanced Materials; POLYMERSnetBASE (CRC Press) for Advanced Materials; additional technical reports in the SAE Digital Library for Automotive Engineering; Rosetta Stone language learning for Automotive Engineering.

See Appendix 4 for a list of faculty research interests

1. Purpose of Collection:

To support the teaching, research, and information needs at the undergraduate and graduate level in Electrical and Computer Engineering.

Primary Users:

- Undergraduates pursuing the BS degree in either Electrical Engineering or Computer Engineering
- Graduate students pursuing the ME, MS, or PhD degree in Electrical Engineering
- Graduate students pursuing the MS or PhD degree in Computer Engineering
- ECE faculty (http://www.clemson.edu/ces/departments/ece/faculty_staff/)

Secondary Users:

- Students and faculty of departments whose subjects overlap with the interests of ECE, such as Computer Science, Mechanical Engineering, Mathematics, and Physics
- Clemson Computing and Information Technology staff
- Clemson University Centers and Institutes - these in particular:
 - The Center for Research in Wireless Communication
 - Clemson University Electrical Power Research Association
 - Center for Optical Materials Science and Engineering Technology (COMSET)
 - Clemson University International Center for Automotive Research (CU-ICAR)
 - Center for Bioelectronics, Biosensors and Biochips
 - Institute for Biological Interfaces of Engineering
 - Spiro Center for Entrepreneurial Leadership (offer a Technology Entrepreneurship Certificate)
- Researchers and Engineers employed by South Carolina companies

2. General Collection Guidelines:

Scope of the Collection - Materials will be selected in electronic formats when available

- Reference Books, including handbooks, dictionaries, and encyclopedias.
- Monographs – print and electronic – will be selected to support the research and coursework of undergraduate and graduate students as well as the research and teaching needs of the faculty. E-book packages from Knovel and Springer are especially valued. During budget crisis times (such as now) books will be chosen very selectively, primarily in response to requests from faculty and students. After the completion of the serials review (2010/2011), a formal analysis of the monographs collection will begin.
- Textbooks used in Clemson classes will not be purchased, unless they are deemed to be useful for other reasons. Nor can Clemson textbooks be borrowed on Interlibrary Loan.
- Industry standards play an important role in the research process. Therefore, we will maintain a subscription to ASTM standards, and bibliographic access to additional standards through ANSI. Standards will be purchased on an as-needed basis, with a budget of \$5,000. per year.

- The primary databases supporting Electrical and Computer Engineering are: Engineering Village (Compendex, Engineering Index historical, and Inspec), SciFinder Scholar, IEEE Xplore, and Web of Knowledge (Science Citation Index and Inspec). Secondary databases include ACM Digital Library, and Computer Science Index.
- Journals /serials / periodicals will be selected for two primary purposes: to support undergraduate research and coursework, and to support graduate and faculty research. General interest titles and trade publications might be included in Aggregators (databases such as Academic Search Premier, Lexis / Nexis, and General Business file. At this time, individual subscriptions are retained in order to have an up-to-date subscription that is under our own control. With a serials review beginning in Spring 2010, this is subject to change.

See Appendix 5 for a list of Important Journals in Electrical and Computer Engineering.

Languages

Unless otherwise requested by a faculty member, all material will be written in English.

Date of Publication

Most materials purchased will have been published within the preceding two years. Older works will be purchased at the request of a faculty member, to replace heavily-used volumes that have been lost, or for which demand has been shown through Interlibrary Loan borrowing.

Geographical Guidelines

I recognize the global nature of research, and the importance of representing a wide variety of points of view and international perspectives. However, due to serious budget constraints, materials originating/published in the United States will be the primary focus.

Format

Wherever possible, reference works, indexes, and journals will be purchased in electronic format and made available from the Libraries' Web site for access by students and faculty, on and off campus. Print materials will also be selected. Micro formats will be purchased if it is the only format available. Appropriate materials will be purchased on CD-ROM or DVD, when requested by a faculty member.

3. Access to Information Not Available at Clemson

Interlibrary Loan

The primary means of access to materials not owned or accessible by the library is [Interlibrary Loan](#), a service available free to Clemson University students, faculty, and staff.

PASCAL Delivers

Books available from other research institutions in South Carolina can be supplied by [Pascal Delivers](#), also free to Clemson University students, faculty and staff.

4. Selection, Evaluation, and Assessment Tools:

- Faculty requests and recommendations
- Review sources, e.g. *Choice*
- Approval slips from YBP ensure notification of titles that fit the needs of the library's circulating collection. The approval plan is reviewed yearly to ensure that it remains relevant. During bad budget years (as now), the approval plan will be suspended.
- Publishers' catalogs
- Vendor's databases (GOBI)
- Indexes, bibliographies, and series lists
- Teaching and research interests of the Bioengineering faculty
- *Books for College Libraries* and *Magazines for Libraries*
- Interlibrary loan activity
- Circulation activity
- Usage statistics for databases, e-journals and e-books

5. Weeding Guidelines

Books will be weeded from the collection if they are in poor condition and cannot be repaired. A replacement copy will be purchased, if available, for important titles. Duplicate copies of books that have not circulated, and material that is clearly outdated and not of historical interest will also be considered for weeding.

6. Summary of Primary Subject Classifications, LC Call Numbers, and Collecting Levels

Subject	LC Class	Collecting Level
Electrical Engineering	TK1 – TK5100	grad/undergrad
Computer Engineering	TK5101-TK7895	grad/undergrad

Appendix 3

College of Engineering and Science, Centers, Alliances and Affiliated Institutes

Bioengineering Alliance of South Carolina

Dr. Richard Swaja, Director
BSB 612, Medical Univ. of South Carolina, 171 Ashley Ave., Charleston, SC 29425
(Voice) 843-792-0430; swajar@musc.edu

National Brick Research Center

Dr. Denis Brosnan, Director
The Bishop Center, Clemson Research Park
(Voice) 656-0603; bdenis@clemson.edu

Center for Advanced Engineering Fibers and Films (CAEFF)

Dr. Amod A. Ogale, Director
203 Earle Hall
(Voice) 656-5483; ogale@clemson.edu

Construction Industry Cooperative Alliance (CICA)

Dr. Steve Sanders, Director
114 Lowry Hall
(Voice) 656-3661; steves@clemson.edu

Center for Research in Wireless Communication

Dr. Wilson Pearson
301 Fluor Daniel Building
(Voice) 656-3946; PL@clemson.edu

Center for Optical Materials Science and Engineering Technologies (COMSET)

Dr. John Ballato, Director
AMRL, 91 Technology Dr., Clemson Res. Park
(Voice) 656-1035; jballat@clemson.edu

CU Electrical Power Research Association (CUEPRA)

Dr. Adly A. Girgis, Director
303 Riggs Hall
(Voice) 656-5936; adly.girgis@ces.clemson.edu

Center of Excellence in Mathematics & Science Education (CEMSE)

Dr. Calvin Williams
Mathematical Sciences, O323 Martin Hall
(Voice) 656-5241; CALVINW@CLEMSON.EDU

Center for Advanced Materials for Thermoelectric Energy Conversion (CAMTEC)

Dr. Terry Tritt, Director
103 Kinard Lab
(Voice) 656-5319; ttritt@clemson.edu

Conservation Center

Dr. Michael J. Drews, Director
268 Sistine Hall
(Voice) 656-5955; DMICHA@CLEMSON.EDU

Laboratory for Emerging Materials

Dr. Ya-Ping Sun, Director
469 Hunter
(Voice) 656-5026; syaping@clemsn.edu

Nuclear Environmental Sciences and Radiation Waste Management (NESRWM)

Robert Fjeld, Director
166 Rich Lab/Research Park
(Voice) 656-5569; FJELD@clemsn.edu

SC COBRE Center of Biomaterials for Tissue Regeneration (SCBioMat)

Dr. Naren Vyavahare, Director
501 Rhodes Research Center
(Voice) 864-656-5558; narenv@clemsn.edu

Affiliated Institutes

Campbell Graduate Engineering Center (CGEC)

Dr. Imtiaz Haque, Executive Director
Campbell Graduate Engineering Center @ CU-ICAR
4 Research Dr., Greenville, SC 29607
(Voice) 864-283-7212; sih@clemsn.edu

Automotive Safety Research Institute (CU-ASRI)

Kim E. Alexander
D141 Poole AG Center
(Voice) 656-0664; KALXNDR@CLEMSON.EDU

Institute of Biological Interfaces of Engineering

Dr. Karen J. L. Burg, Director
401 Rhodes
(Voice) 656-6462; KBURG@CLEMSON.EDU

South Carolina's Coalition for Mathematics and Science

Dr. Tom Peters, Director
Sears House #3, Highway 93
(Voice) 656-1863; tpeters@ssi.edc.org

Clemson Engineering Technology Lab (CETL)

Donald L. Erich
100 Technology Dr., Research Park, Pendleton, SC
(Voice) 646-2413; derich@clemsn.edu

Clemson University International Center for Automotive Research

Robert T. Geolas
CU-ICAR, 10 Falcon Crest Dr., Greenville, SC 29603
(Voice) (864) 298-2292; GEOLAS@CLEMSON.EDU

Clemson Apparel Research (CAR)

Dr. Christine W. Cole, Director
500 Lebanon Road, Pendleton, SC 29670
(Voice) 646-8454; cwjrv@clemson.edu

SC Institute for Energy Studies (SCIES)

Dr. Robert Leitner, Director
200 Dillard Building, 400 Klugh Ave., Clemson, SC 29634
(Voice) 656-2267; RLEITNE@CLEMSON.EDU

Supply Chain Optimization and Logistics (CISCOL)

Dr. William G. Ferrell, Jr.
200 Freeman Hall
(Voice) 656-2724; FWILLIA@CLEMSON.EDU

Institute for Modeling and Simulation Applications

Dr. Steve (Dennis E.) Stevenson, Director
442 Edwards Hall
(Voice) 656-5880; STEVE@clemson.edu

Clemson Environmental Institute (CIES)

Dr. Alan Elzerman
Rich Lab, Clemson Research Park
(Voice) 656-5568; AWLZRMN@CLEMSON.EDU

Clemson Institute for Biomedical Science and Engineering

Dr. Martine LaBerge
301 Rhodes
(Voice) 656-5557; LABERGE @CLEMSON.EDU

Center for Motorsports Excellence

Dr. Thomas Kurfess, Director
4 Research Dr., Greenville, SC 29617
(Voice) (864)283-7219; kurfess@clemson.edu

Clemson University Computational Center for Mobility Systems

Dr. James Leylek, Executive Director
74 Research Dr., CU-ICAR Campus, Greenville, SC 29607
(Voice) (864) 283-7300; jleylek@clemson.edu

Communications	
communications theory	Baum
coding theory	
detection and estimation theory	
design and performance analysis of receivers for coded wireless spread-spectrum communication	
algorithms for coordinated and uncoordinated channel sharing for wireless and adhoc networks and wireless sensor networks	
design of sequential multihypothesis test	
Green's functions and integral equation techniques in electromagnetics	Chalmers Butler
numerical methods for solving integral equations.	
speech recognition, audio-visual speech recognition, speaker recognition	John Gowdy
speech coding, speech synthesis	
analysis of foreign language sounds	
detecting artifacts in rotating objects	
real-time quality analysis of yarn evenness	
real-time quality analysis of textile dyeing	
applied signal processing	Stephen Hubbard
statistical signal analysis techniques for assessing electric power quality	
Electric Energy Conversion and Storage	Todd Hubing
spread spectrum communications	John Komo
finite field applications	(retired)
wideband & switched antennas	Anthony Martin
EM penetration into electronic devices	
efficient electromagnetic devices	
efficient electromagnetic computational methods	
wireless communication for military and commercial applications	Daniel Noneaker
spread spectrum communications	
error-control coding for fading channels	
protocols for mobile radio networks	
RF front ends for software-defined radio operating over extreme bandwidths	Wilson Pearson
digital preconditioning to augment RF performance	
adaptive protocols for cognitive radios	Michael Pursley
Shannon capacity limits on the achievable throughput	
low-complexity adaptive transmission protocols	
distributed protocols for wireless networks	Harlan Russell
reliable and efficient mobile wireless networks	

wireless networks and mobile computing	Kuang-Ching Wang
ad hoc sensor networks	
broadband wireless networking under extreme mobility	
reliable wireless networking under harsh radio conditions	
wireless network testbeds and software simulators	
distributed protocols	
pervasive applications and embedded systems	
applied electromagnetic theory and numerical methods,	Xiao-Bang Xu
surface/volume integral equation methods and application of the hybrid finite element/boundary integral equation method to study the electromagnetic scattering/radiation near a media interface	
Sommerfield-type integrals	
remote sensing detection of buried targets	
geophysical exploration	
nondestructive testing of underground facilities,	
application of electromagnetic theory and numerical techniques in the analysis of power transmission/distribution systems	
fourier series technique and unimoment method	
nonlinear magnetic materials	
extremely-low-frequency magnetic fields generated by underground power transmission lines	
zero-sequence of underground pipe-type cables	

Computer Systems	
distributed systems that interact with the real world and adapt to disturbances	Richard Brooks
self-organization, sensor networks and information assurance	
community-specific (virtual organization)	Jill Gemmill
secure collaborative environments	
Federated identity; authentication and authorization in distributed environments	
Network performance impact on applications	
Integration of visualization, computation, and networks	
re-usable data in reseach domains	
tracking systems (physical problems, signal problems)	Adam Hoover III
state space modeling, filtering, and embedded computing	
custom lasertag system	
Image and signal processing	
arousal meter	
parallel I/O systems	Walter Ligon III
parallel computing environments	
high performance computing	
reconfigurable architectures	
grid scheduling and co-allocation	
compilers	
operating systems	
high performance network protocols	
soft-decision decoding of BCH codes	William Reid
digital image processing, pattern recognition & computer vision	Robert Schalkoff
surface modeling & mapping	
autonomous visual inspection	
biometric pattern recognition	
color image processing	
image sequence analysis	
meta-algorithms and machine learning	
evolutionary and soft computing	
artificial intelligence	
artificial neural networks	
fuzzy systems	
Programming languages and paradigms	
peer-to-peer and content delivery networks	Shen
wireless networks and wireless sensor networks	
high performance cluster and grid computing	
publish/subscribe systems	
data mining	

ECE Faculty Research Interests

reconfigurable and high-performance computing	Melissa Smith
embedded computing;	
High-Speed Data Acquisition systems	
software defined radio	
distributed sensor networks	
System Performance Modeling and Analysis	
high performance computing	Barr von Oehsen
high throughput computing	
compiler for distributed computing on hybrid architectures	
parallel programming	
distributed grids	
mathematical modeling;	
hardware architecture	
visualization	
development of advanced cyberinfrastructure to support scientific data collection	David White
quality assurance/quality control and visualization	
information technology	
data management	
coastal and estuarine ecology	
hydrology	
GIS	

Electronics	
surge ingress mechanisms and ameliorative strategies in industrial control systems	Michael Bridgewood
power quality, power electronics	Randy Collins
electric machines; adjustable speed motor drives	
stray voltage	
impact of electric power system disturbances on industrial process equipment	
aging aircraft power and wiring systems	
organic electronics: polymer-based devices	Rod Harrell
polymer/carbon nanotube compositions	
bioelectronics	
VLSI reliability	James Harriss
semiconductor manufacturing,	
statistical process control	
design of experiments	
modeling antennas in automobiles	Todd Hubing
Automobile electronics expert system	
flat panel displays; micro and nano plasma devices; micro and nano bio fuel devices	Sung-O Kim
plasma thin films; flexible displays; OLED	
defect-related failures in integrated circuits	Kelvin Poole
sensor measurement for detecting toxins	
rapid thermal processing	Rajendra Singh
ultra thin gate dielectrics	
superconductivity	
nanotechnology	
theroelectric devices	
manufacturing of silicon integrated circuits	
solar cells	
low and high-k dielectrics	
integrated radio frequency systems; network-analyser-on-chip (NAoC)	Pingshan Wang
spatial sampling based high-speed analog-to-digital converters	
nonlinear properties of dielectric fluids	
spin dynamics of patterned ferromagnetic structures	
Nanophotonics	Lin Zhu
optical microcavity and photonic crystal lasers	
plasmonics & metamaterials	
high power solid-state and fiber lasers	

Intelligent Systems	
vehicle segmentation, tracking, and classification	Stanley Birchfield
mobile robot mapping and navigation	
minirhizotron analysis	
distributed systems that interact with the real world and adapt to disturbances	Richard Brooks
self-organization, sensor networks and information assurance	
control of aerial vehicles	Tim Burg
sample collection with UAVs	
bioprinting	
haptics	
rfid applications	
design and experimental validation of advanced model based controllers for mechatronic systems (electric motors, robot manipulators, overhead cranes, active magnetic bearings, flexible cables/beams, vision-based systems, automotive systems, unmanned vehicles, etc.)	Darren Dawson
power system control	Adly Girgis
harmonics	
measurements protection and transients	
real time computer application in power systems	
signal processing	
kalman filtering applications in power systems	
how the built environment (at scales ranging from small domestic objects to buildings to urban infrastructure) might behave more like living things in response to human needs and opportunities in an increasingly digital society	Keith Green
designing, prototyping and evaluating "intelligent environments" with embedded robotics	
computer-supported collaborative work	
Animated Work Environment (AWE)	
Intelligent, Robot-Embedded Domestic Environments for Aging in Place (with GHS)	
Intelligent Learning environments	
application of systems theory to the design, analysis, and fabrication of physical systems, especially small length scales and biological systems	Rick Groff
use of novel materials in sensors and actuators	
bio-inspired design and control	
fabrication and rapid prototyping of electromechanical systems at small length scales	
magnetic microfibers	
bio-printing	
partial differential equations (PDE)	
state space modeling, filtering, and embedded computing	Adam Hoover
custom lasertag system	
Military operations in urban terrain	
arousal meter	

Title	Holdings	ISSN	Fac Pub
ACM Transactions on Sensor Networks	2005-date, ACM Digital Library		1
Ad Hoc Networks	2003-date, Science Direct		1
Advanced Robotics	1986-date, Ingenta; 2000-date, Kluwer		1
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS	2001-date Science Direct	1434-8411	
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING	1997-date, Kluwer	0925-1030	
APPLIED ARTIFICIAL INTELLIGENCE	1996-a year ago, EBSCO, 1999-date, T & F	0883-9514	
AUTOMATICA	1995-date, Science Direct	0005-1098	5
BELL LABS TECHNICAL JOURNAL	1996-date, Wiley, plus aggregators	1089-7089	
BT TECHNOLOGY JOURNAL	1997-date, Kluwer	1358-3948	
CANADIAN JOURNAL OF ELECTRICAL AND COMPUTER ENGINEERING-REVUE CANADIENNE	IEEE/IET Library, 1988-date	0840-8688	
CIRCUIT WORLD	1974-date Emerald Engineering	0305-6120	
CIRCUITS SYSTEMS AND SIGNAL PROCESSING	1997-date, Kluwer	0278-081X	
COMPEL	1982-date emerald	0332-1649	
Computers and Security	1995-date, Science Direct		1
COMPUTER COMMUNICATIONS	1995-date, Science Direct	0140-3664	
Computer Networks	1995-date, Science Direct	1389-1286	
COMPUTER VISION AND IMAGE UNDERSTANDING	1995-date, AP Ideal	1077-3142	
COMPUTERS & ELECTRICAL ENGINEERING	1995-date, Science Direct	0045-7906	
CONNECTOR SPECIFIER	2003-date, Business Source Premier	1078-1528	
CONTROL ENGINEERING	1999-date, many aggregators	0010-8049	
CONTROL ENGINEERING PRACTICE	1995-date, Science Direct	0967-0661	3
DIGITAL SIGNAL PROCESSING	1995-date, AP Ideal	1051-2004	
DISPLAYS	1995-date, Science Direct	0141-9382	
EDN	1988-date, many aggregators	0012-7515	
EE-EVALUATION ENGINEERING	2001-date, many aggregators	0149-0370	
ELECTRIC POWER COMPONENTS AND SYSTEMS	1997-date, Informaworld, 2001-date Ebsco	1532-5008	
ELECTRIC POWER SYSTEMS RESEARCH	1995-date, Science Direct	0378-7796	10
ELECTRICAL ENGINEERING	1997-date, Springer	0948-7921	
ELECTROMAGNETICS	1997-date, Springer	0272-6343	2
ELECTRONICS LETTERS	IEEE/IET Library, 1965-date	0013-5194	1
ELECTRONICS WORLD	v.102 (1996)-date print	1365-4675	
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE	1995-date, Science Direct	0952-1976	

EURASIP Journal on Wireless Communications and Networking	2005-date Gale	1687-1499
EXPERT SYSTEMS WITH APPLICATIONS	1995-date, Science Direct	0957-4174
IEEE AEROSPACE AND ELECTRONIC SYSTEMS MAGAZINE	IEEE/IET, 1988-date	0885-8985
IEEE ANTENNAS AND PROPAGATION MAGAZINE	IEEE/IET, 1990-date	1045-9243
IEEE Antennas and Wireless Propagation Letters	IEEE/IET, 2002-date	1536-1225
IEEE CIRCUITS & DEVICES	IEEE/IET, 2001-date	8755-3996
IEEE COMMUNICATIONS MAGAZINE	IEEE/IET, 1977-date	0163-6804
IEEE Communications Letters	IEEE/IET, 1997-date	
IEEE Control Systems	IEEE/IET, 1985-date	3
IEEE ELECTRICAL INSULATION MAGAZINE	IEEE/IET, 1980-date	0883-7554
IEEE ELECTRON DEVICE LETTERS	IEEE/IET, 1985-date	0741-3106
IEEE Geoscience and Remote Sensing Letters	IEEE/IET, 2004-date	1545-598X
IEEE INDUSTRY APPLICATIONS MAGAZINE	IEEE/IET, 1995-date	1077-2618
IEEE INSTRUMENTATION & MEASUREMENT MAGAZINE	IEEE/IET, 1998-date	1094-6969
IEEE INTELLIGENT SYSTEMS	IEEE/IET, 2001-date	1541-1672
IEEE Internet Computing	IEEE/IET, 1997-date	3
IEEE JOURNAL OF OCEANIC ENGINEERING	IEEE/IET, 1976-date	0364-9059
IEEE JOURNAL OF QUANTUM ELECTRONICS	IEEE/IET, 1965-date	0018-9197
IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS	IEEE/IET, 1995-date	1077-260X
IEEE JOURNAL OF SOLID-STATE CIRCUITS	IEEE/IET, 1966-date	0018-9200
IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS	IEEE/IET, 2008-date	0733-8716
IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS	IEEE/IET, 2001-date	1531-1309
IEEE MICROWAVE MAGAZINE	IEEE/IET, 2000-date	1527-3342
IEEE NETWORK	IEEE/IET, 2001-date	0890-8044
IEEE PERSVASIVE COMPUTING	IEEE/IET, 1988-date	1536-1268
IEEE PHOTONICS TECHNOLOGY LETTERS	IEEE/IET, 1989-date	1041-1135
IEEE SENSORS JOURNAL	IEEE/IET, 2001-date	1530-437X
IEEE SIGNAL PROCESSING LETTERS	IEEE/IET, 1994-date	1070-9908
IEEE SIGNAL PROCESSING MAGAZINE	IEEE/IET, 1991-date	1053-5888
IEEE SPECTRUM	IEEE/IET, 1965-date	0018-9235
IEEE TECHNOLOGY AND SOCIETY MAGAZINE	IEEE/IET, 1998-date	0278-0097
IEEE TRANSACTIONS ON ADVANCED PACKAGING	IEEE/IET, 1999-date	1521-3323
IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS	IEEE/IET, 1965-date	0018-9251
IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION	IEEE/IET, 1963-date	0018-926X
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Important Journals in ECE

IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY	IEEE/IET, 1991-date	1051-8223
IEEE Transactions on Audio Speech and Language Processing	IEEE/IET, 2006-date	1558-7916
IEEE TRANSACTIONS ON AUTOMATIC CONTROL	IEEE/IET, 1963-date	0018-9286
IEEE TRANSACTIONS ON BROADCASTING	IEEE/IET, 1963-date	0018-9316
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY	IEEE/IET, 1991-date	1051-8215
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS II-EXPRESS BRIEFS	IEEE/IET, 2004-date	1549-7747
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS I-REGULAR PAPERS	IEEE/IET, 2004-date	1549-8328
IEEE TRANSACTIONS ON COMMUNICATIONS	IEEE/IET, 1972-date	0090-6778
IEEE TRANSACTIONS ON COMPONENTS AND PACKAGING TECHNOLOGIES	IEEE/IET, 1999-date	1521-3331
IEEE TRANSACTIONS ON COMPUTER-AIDED DESIGN OF INTEGRATED CIRCUITS AND SYS	IEEE/IET, 1982-date	0278-0070
IEEE TRANSACTIONS ON COMPUTERS	IEEE/IET, 1968-date	0018-9340
IEEE TRANSACTIONS ON CONSUMER ELECTRONICS	IEEE/IET, 1975-date	0098-3063
IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY	IEEE/IET, 1993-date	1063-6536
IEEE TRANSACTIONS ON DEVICE AND MATERIALS RELIABILITY	IEEE/IET, 2001-date	1530-4388
IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION	IEEE/IET, 1994-date	1070-9878
IEEE TRANSACTIONS ON EDUCATION	IEEE/IET, 1963-date	0018-9359
IEEE TRANSACTIONS ON ELECTROMAGNETIC COMPATIBILITY	IEEE/IET, 1964-date	0018-9375
IEEE TRANSACTIONS ON ELECTRON DEVICES	IEEE/IET, 1954-date	0018-9383
IEEE TRANSACTIONS ON ENERGY CONVERSION	IEEE/IET, 1988-date	0885-8969
IEEE TRANSACTIONS ON FUZZY SYSTEMS	IEEE/IET, 1993-date	1063-6706
IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING	IEEE/IET, 1980-date	0196-2892
IEEE TRANSACTIONS ON IMAGE PROCESSING	IEEE/IET, 1992-date	1057-7149
IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS	IEEE/IET, 1982-date	0278-0046
IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS	IEEE/IET, 1972-date	0093-9994
IEEE Transactions on Information Forensics and Security	IEEE/IET, 2006-date	1556-6013
IEEE TRANSACTIONS ON INFORMATION THEORY	IEEE/IET, 1963-date	0018-9448
IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT	IEEE/IET, 1963-date	0018-9456
IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS	IEEE/IET, 2000-date	1524-9050
IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING	IEEE/IET, 1989-date	1041-4347
IEEE TRANSACTIONS ON MAGNETICS	IEEE/IET, 1965-date	0018-9464
IEEE TRANSACTIONS ON MEDICAL IMAGING	IEEE/IET, 1982-date	0278-0062
IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES	IEEE/IET, 1963-date	0018-9480
IEEE TRANSACTIONS ON NANOTECHNOLOGY	IEEE/IET, 2002-date	1536-125X
IEEE TRANSACTIONS ON NEURAL NETWORKS	IEEE/IET, 1990-date	1045-9227

IEEE TRANSACTIONS ON NUCLEAR SCIENCE	IEEE/IET, 1963-date	0018-9499
IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS	IEEE/IET, 1990-date	1045-9219
IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE	IEEE/IET, 1988-date	0162-8828
IEEE TRANSACTIONS ON POWER DELIVERY	IEEE/IET, 1986-date	0885-8977
IEEE TRANSACTIONS ON POWER ELECTRONICS	IEEE/IET, 1987-date	0885-8993
IEEE TRANSACTIONS ON POWER SYSTEMS	IEEE/IET, 1986-date	0885-8950
IEEE TRANSACTIONS ON RELIABILITY	IEEE/IET, 1963-date	0018-9529
IEEE Transactions on Robotics / Robotics and Automation	IEEE/IET, 1989-date	8
IEEE TRANSACTIONS ON SEMICONDUCTOR MANUFACTURING	IEEE/IET, 1988-date	0894-6507
IEEE TRANSACTIONS ON SIGNAL PROCESSING	IEEE/IET, 1991-date	1053-587X
IEEE TRANSACTIONS ON SOFTWARE ENGINEERING	IEEE/IET, 1976-date	0098-5589
IEEE Transactions on Speech and Audio Processing	IEEE/IET, 1963-date	1
IEEE Transactions on Systems, Man and Cybernetics, Parts A-C	IEEE/IET, 1971-date	11
IEEE TRANSACTIONS ON ULTRASONICS FERROELECTRICS AND FREQUENCY CONTROL	IEEE/IET, 1986-date	0885-3010
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY	IEEE/IET, 1967-date	0018-9545
IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS	IEEE/IET, 1993-date	1063-8210
IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS	IEEE/IET, 2002-date	1536-1276
IEEE Vehicular Technology Magazine	IEEE/IET, 2006-date	1
IEEE WIRELESS COMMUNICATIONS	IEEE/IET, 2002-date	1536-1284
IEEE-ACM TRANSACTIONS ON NETWORKING	IEEE/IET, 1993-date	1063-6692
IEEE-ASME TRANSACTIONS ON MECHATRONICS	IEEE/IET, 1993-date	1083-4435
IEICE TRANSACTIONS ON COMMUNICATIONS	2006-2008, Oxford	0916-8516
IEICE TRANSACTIONS ON ELECTRONICS	2006-2008, Oxford	0916-8524
IEICE TRANSACTIONS ON FUNDAMENTALS OF ELECTRONICS COMMUNICATIONS AND C	2006-2008, Oxford	0916-8508
IET Circuits Devices & Systems	IEEE/IET 2007-date	1751-858X
IET Communications	IEEE/IET, 2007-date	1751-8628
IET Computer Vision	IEEE/IET, 2007-date	1751-9632
IET Control Theory and Applications	IEEE/IET, 2007-date	1751-8644
IET Electric Power Applications	IEEE/IET, 2007-date	1751-8660
IET Engineering and Technology	IEEE/IET, 2006-date	1750-9637
IET Generation Transmission & Distribution	IEEE/IET, 2007-date	1751-8687
IET Image Processing	IEEE/IET, 2007-date	1751-9659
IET Microwaves Antennas & Propagation	IEEE/IET, 2007-date	1751-8725
IET Optoelectronics	IEEE/IET, 2007-date	1751-8768

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IET Science Measurement & Technology	IEEE/IET, 2007-date	1751-8822
IET Signal Processing	IEEE/IET, 2007-date	1751-9675
IMAGE AND VISION COMPUTING	1995-date, Science Direct	0262-8856
Industrial Robot	1994-date, Emerald Engineering	1
INTEGRATED FERROELECTRICS	1997-a year ago, Informaworld	1058-4587
INTERNATIONAL JOURNAL OF ADAPTIVE CONTROL AND SIGNAL PROCESSING	1996-date, Science Direct	0890-6327
INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS	3/1/1996-9 mos. ago	1383-5416
INTERNATIONAL JOURNAL OF CIRCUIT THEORY AND APPLICATIONS	1996-date, Science Direct	0098-9886
International Journal of Distributed Sensor Networks (Ceased 2010?)	Informaworld, 2005-2009	6
INTERNATIONAL JOURNAL OF ELECTRICAL ENGINEERING EDUCATION	1999-date, several aggregators	0020-7209
INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS	1995-date, Science Direct	0142-0615
INTERNATIONAL JOURNAL OF ELECTRONICS	1965-18 mos. ago, Ebsco	0020-7217
International Journal of Human Computer Interaction	1997-date, Informaworld; other aggregators	1
INTERNATIONAL JOURNAL OF IMAGING SYSTEMS AND TECHNOLOGY	1996-date, Science Direct	0899-9457
INTERNATIONAL JOURNAL OF INFRARED AND MILLIMETER WAVES	1997-2008, Springer (TITLE CHANGE?)	0195-9271
INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVIC	1996-date, Wiley	0894-3370
INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL	1996-date, Wiley	1049-8923
INTERNATIONAL JOURNAL OF SOFTWARE ENGINEERING AND KNOWLEDGE ENGINEERIN	1999-a year ago, Ebsco	0218-1940
International Journal of Systems Science	1997-date, Informaworld; other aggregators	1
International Journal of Vehicle Design (Looking into online option)	1982-date, print	2
International Journal of Wireless Information Networks	1997-date, Kluwer	2
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS	1999-a year ago, Ebsco	0218-1266
JOURNAL OF CRYPTOLOGY	1997-date, Springer	0933-2790
Journal of Dynamic Systems Measurement and Control - Transactions of the ASME	1980-date, Ebsco; 2000-date ASME	6
JOURNAL OF ELECTROMAGNETIC WAVES AND APPLICATIONS	3/2009-date, Gale, print 1990-2006	0920-5071
JOURNAL OF ELECTRONIC MATERIALS	1997-date, Springer; 1996-2007 Ingenta	0361-5235
JOURNAL OF ELECTRONIC PACKAGING	2000-date, Ebsco, ASME	1043-7398
JOURNAL OF ELECTRONIC TESTING-THEORY AND APPLICATIONS	1997-date, Springer	0923-8174
JOURNAL OF ELECTROSTATICS	1995-date, Science Direct	0304-3886
Journal of Guidance Control and Dynamics	2001-date, Ebsco; 2003-date, AIAA Publications	3
JOURNAL OF HIGH SPEED NETWORKS	6/1996 to 9 mos. ago Gale	0926-6801
Journal of Infrared Millimeter and Terahertz Waves	2009-date, Springer	
Journal of Intelligent & Robotic Systems	1997-date, Kluwer	1
JOURNAL OF LIGHTWAVE TECHNOLOGY	IEEE/IET	0733-8724
		1

Appendix 5

Important Journals in ECE

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS	1997-date, Kluwer	0957-4522
JOURNAL OF MICROELECTROMECHANICAL SYSTEMS	IEEE/IET	1057-7157
JOURNAL OF MICROMECHANICS AND MICROENGINEERING	1991-date, IOP	0960-1317
Journal of Parallel and Distributed Computing	1995-date, Science Direct	2
Journal of Signal Processing Systems for Signal Image and Video Technology	2008-date	1939-8018
Journal of Sound and Vibration	1964-date, Science Direct	1
JOURNAL OF SUPERCOMPUTING	1997-date, Kluwer	0920-8542
Journal of Systems and Software	1995-date, Science Direct	1
Journal of the Electrochemical Society	1948-date, Electrochemical Society Digital Library	1
JOURNAL OF THE FRANKLIN INSTITUTE-ENGINEERING AND APPLIED MATHEMATICS	1995-date, Science Direct	0016-0032
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B	1999-date, indiv. Subscription	1071-1023
Journal of Vibration and Control	1995-date, several aggregators	2
JOURNAL OF VLSI SIGNAL PROCESSING SYSTEMS FOR SIGNAL IMAGE AND VIDEO TECHN	1983-date	0922-5773
MACHINE VISION AND APPLICATIONS	1997-date, Springer	0932-8092
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING	4/1/1998-date, Science Direct	1369-8001
MATHEMATICS OF CONTROL SIGNALS AND SYSTEMS	1997-date, Springer	0932-4194
Mechanical Systems and Signal Processing	1997-date, Ebsco	1
MECHATRONICS	1995-date, Science Direct	0957-4158
MICROELECTRONIC ENGINEERING	1983-date, Science Direct	0167-9317
MICROELECTRONICS INTERNATIONAL	1996-date, Emerald	1356-5362
MICROELECTRONICS JOURNAL	1997-date, Science Direct	0026-2692
MICROPROCESSORS AND MICROSYSTEMS	1995-date, Science Direct	0141-9331
MICROSYSTEM TECHNOLOGIES-MICRO-AND NANOSYSTEMS-INFORMATION STORAGE A	1997-date, Springer	0946-7076
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS	1996-date, Wiley	0895-2477
MICROWAVE JOURNAL	1989-2005, Gale, 2002-date, Ebsco	0192-6225
MICROWAVES & RF	2004-date, Ebsco	0745-2993
MULTIDIMENSIONAL SYSTEMS AND SIGNAL PROCESSING	1997-date, Springer	0923-6082
MULTIMEDIA TOOLS AND APPLICATIONS	1997-date, Springer	1380-7501
OPTICAL AND QUANTUM ELECTRONICS	1997-date, Springer	0306-8919
OPTICAL FIBER TECHNOLOGY	1995-date, Science Direct	1068-5200
OPTO-ELECTRONICS REVIEW	3/1/2006-date, Springer	1230-3402
PATTERN RECOGNITION	1995-date, Science Direct	0031-3203
Pattern Recognition Letters	1995-date, Science Direct	1
POWER ENGINEER	1991-date, many aggregators	1479-8344

Appendix 5

Important Journals in ECE

PROCEEDINGS OF THE IEEE	IEEE/IET	0018-9219
Progress in Electromagnetics Research-PIER	v.15, 1997 only, print	1559-8985
PROGRESS IN QUANTUM ELECTRONICS	1995-date, Science Direct	0079-6727
QUANTUM ELECTRONICS	1998-1 year ago, IOP	1063-7818
Radio Science (investigating American Geophysical Union Digital Library)	1966-date, print	1
Reliability Engineering and System Safety	1995-date, Science Direct	2
Robotica	1997-date, Cambridge	8
SEMICONDUCTOR SCIENCE AND TECHNOLOGY	1986-1 year ago, IOP	0268-1242
SEMICONDUCTORS AND SEMIMETALS (VERY IRREGULAR)	1966-2008, print	0080-8784
Sensors	2001-2006, Gale, selected in Lexis/Nexis	1
SENSORS AND ACTUATORS A-PHYSICAL	1995-date, Science Direct	0924-4247
SIGNAL PROCESSING	1995-date, Science Direct	0165-1684
SIGNAL PROCESSING-IMAGE COMMUNICATION	1995-date, Science Direct	0923-5965
SOLDERING & SURFACE MOUNT TECHNOLOGY	1996-date, Emerald	0954-0911
SOLID STATE TECHNOLOGY	1989-date, many aggregators	0038-111X
SOLID-STATE ELECTRONICS	1960-date, Science Direct	0038-1101
WIRELESS NETWORKS	1995-date, ACM	1022-0038
* If electronic holdings, print not noted		
** IEEE/IET, unless stated otherwise, assume that we own the entire run electronically		

Appendix 6

“Core” Journal Packages –Electrical and Computer Engineering

General

Elsevier (Science Direct)

Springer

Wiley-Blackwell

Professional Societies

ACM Digital Library

ASCE Digital Library

ASME Digital Library

IEEE / IET – IEEE Xplore

SAE Digital Library

SPIE Digital Library

Professional Societies (Great Britain)

ICE – Institution of Civil Engineers

IMechE – Institution of Mechanical Engineers

“Core” Databases

General

Engineering Village (Compendex, Historical Engineering Index, and Inspec)

Web of Knowledge (Science Citation Index, Inspec)

Scifinder Scholar (Chemical Abstracts)

Refworks (Bibliographic Citation Management package)

Specific to Electrical and Computer Engineering

Computer Science Index (EBSCO)

MathSciNet (American Mathematical Society)