SYSTEMS RESEARCH AND EDUCATION CONSORTIUM

(SREC)

Innovation in Next-Generation Systems

Director: Dr. Yuhua Chen

Email: yuhuachen@uh.edu
Phone: 713-743-4441
Web: http://www.srl.ee.uh.edu/srec

UNIVERSITY of **HOUSTON**

CULLEN COLLEGE of **ENGINEERING**
Department of Electrical & Computer Engineering

ABOUT SREC:
MISSION AND BACKGROUND

The goal of the Systems Research and Education Consortium (SREC) is to facilitate industry and university collaborations to address the critical need of educating the next-generation highly qualified engineers and researchers.

SREC will provide students with valuable hands-on training experience and enhanced ability to solve real-world research and development problems. SREC will also provide a holistic approach to engineering education, and include instructions on topics such as time management, responsibility and accountability, intellectual property, project management, and healthy living habits.

Founded and led by a female faculty member, SREC will work actively on providing special training and research opportunities for future women engineers, contributing to a more diversified next-generation engineering workforce.

FUNDING:

SREC is financially supported by its industry members. Each Member of the Consortium shall pay an annual membership fee, which will be used to support the Consortium Research and Education Programs that include, but shall not be limited to, technical support, support of personnel, indirect costs, and administrative expenses. The membership fee is based on the membership level, and is due upon joining.

DIRECTOR BIO:

Dr. Yuhua Chen has over 18 years of experience in hardware and software design. She was an IC design engineer at Nortel Semiconductor Co. Ltd. in 1995. She was a Research Associate and Hardware Design Engineer at Applied Research Laboratory, Washington University in St. Louis from 1999 to 2004. She was one of the developers of an ASIC chip, the core technology for Growth Networks, which was acquired by Cisco Systems in 2000. She was one of the primary designers of several FPGA-based networking systems. She joined the University of Houston in 2004. Currently, she is an Associate Professor in the Department of Electrical and Computer Engineering. She has received over 1.5 million dollars in research grants primarily from Federal Agencies such as National Science Foundation.

CONTACT:

SREC
Dr. Yuhua Chen, Director
N308 Engineering Building 1
Department of Electrical and
Computer Engineering
University of Houston
Houston, TX 77204-4005
Email: yuhuachen@uh.edu

SCOPE OF WORK:

SCOPE OF RESEARCH INCLUDES BUT NOT LIMITED TO:

• Advanced communications systems
• Smart systems
• Cloud computing
• Network security
• Systems for medical applications
• Embedded systems and systems with FPGAs.

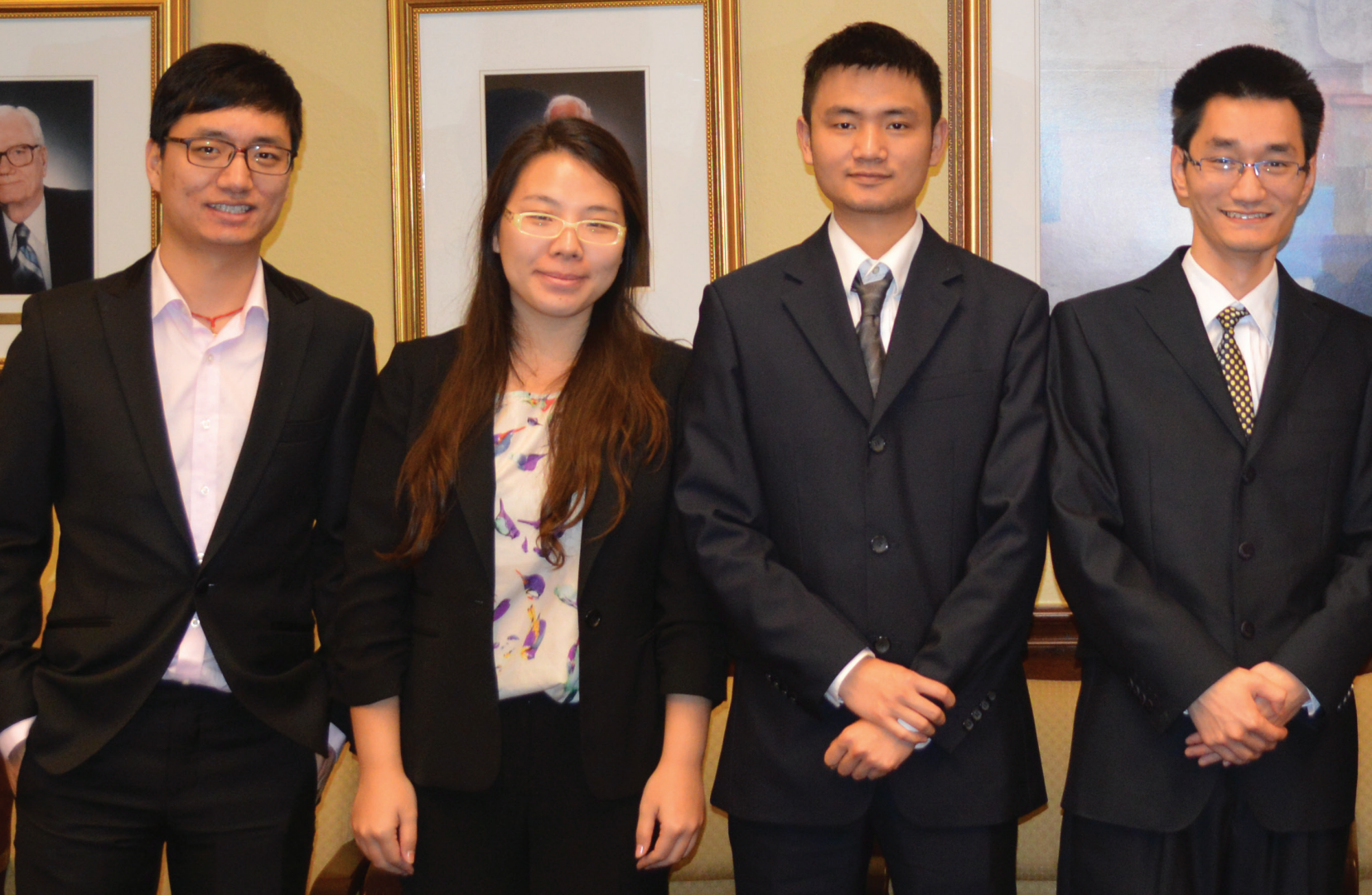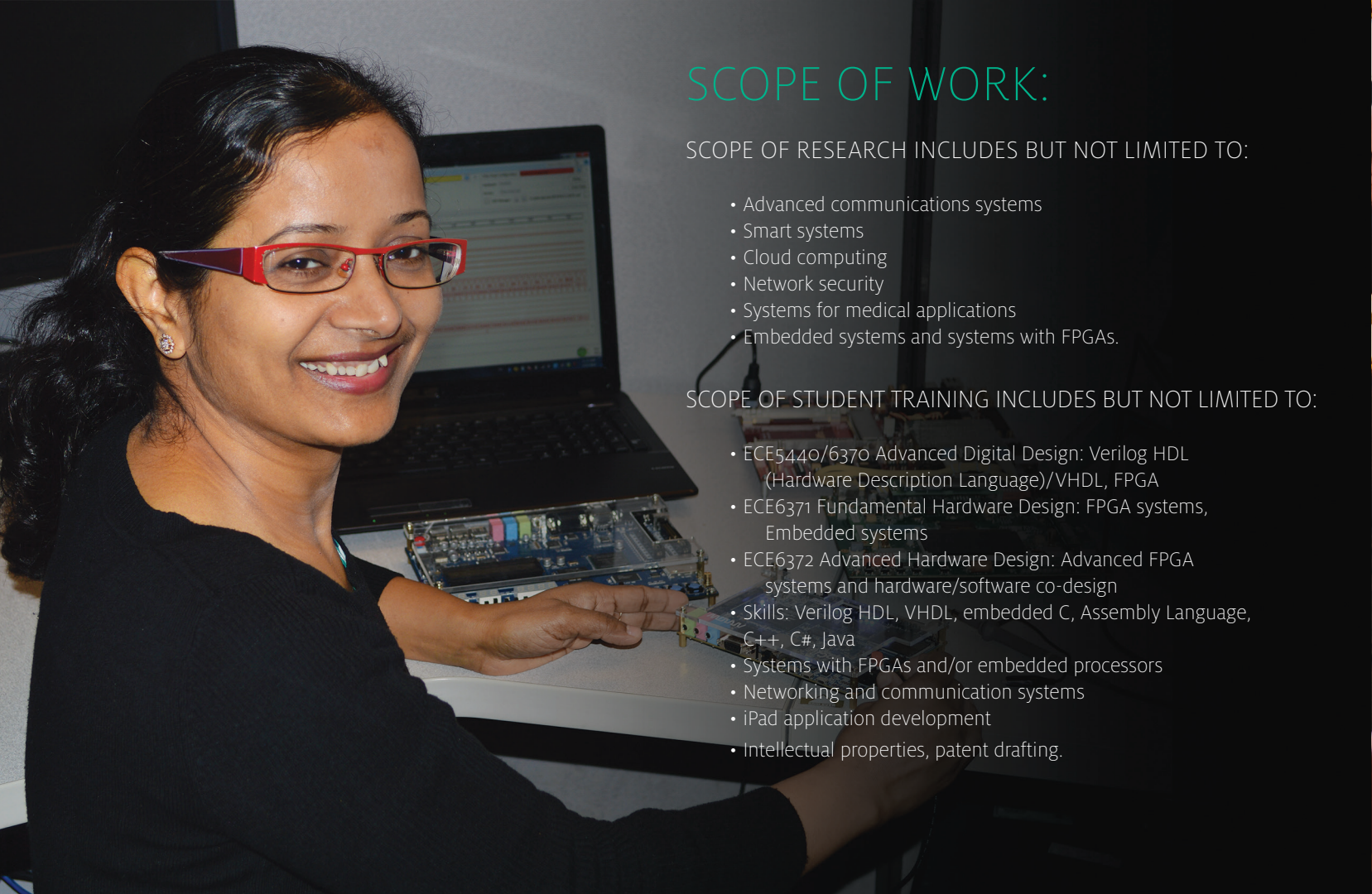### SCOPE OF STUDENT TRAINING INCLUDES BUT NOT LIMITED TO:

• ECE5440/6370 Advanced Digital Design: Verilog HDL
   (Hardware Description Language)/VHDL, FPGA
• ECE6371 Fundamental Hardware Design: FPGA systems,
   Embedded systems
• ECE6372 Advanced Hardware Design: Advanced FPGA
   systems and hardware/software co-design
• Skills: Verilog HDL, VHDL, embedded C, Assembly Language,
   C++, C#, Java
• Systems with FPGAs and/or embedded processors
• Networking and communication systems
• iPad application development
• Intellectual properties, patent drafting.

GET INVOLVED:
MEMBERSHIP INFORMATION

TITANIUM ($65,000, RENEWAL $60,000/YEAR):
- Named Scholarship/Fellowship.
- Active participation and support of SREC research mission.
- Promotion of the overall SREC mission.
- Opportunity to participate in member specific research projects.
- Ability to provide input and direction for specific course projects.
- Recognition on SREC website (e.g. company profile, logo/link)
- Recognition for sponsored research and course projects.
- Honored for sponsored courses.
- Honored for contribution to specific course projects and overall mission.
- Two representatives on the SREC Advisory Committee.

PLATINUM ($35,000, RENEWAL $30,000/YEAR):
- Supports for student training courses.
- Supports the overall SREC mission of the Consortium.
- Ability to provide input and direction for member specific course projects.
- Recognition for sponsored courses.
- Recognition on SREC website for contribution to specific course projects and overall mission.
- One representative on the SREC Advisory Committee.

GOLD ($12,000, RENEWAL $10,000/YEAR):
- Support for the overall SREC mission.
- Ability to provide input and direction for SREC course projects.
- Recognition on SREC website for contribution to specific course projects and overall mission.
- One representative on the SREC Advisory Committee.

SILVER ($6,000, RENEWAL $5,000/YEAR):
- Name a contribution within SREC's overall mission.
- Recognition on SREC website for named contribution.

SMALL BUSINESS/START-UP MEMBERSHIP ($600, RENEWAL $500/YEAR)
- Participating member needs to qualify as Small Business/Start-Up.
- Name a contribution within SREC's overall mission.
- Recognition on SREC website for named contribution.
- Ability to provide input on member specific course/research* projects.

With special projects through SREC.

Special projects can be set up with any membership levels if desired effort exceeds the default benefits covered under the membership.

SREC will actively work with consortium members to identify research and education opportunities, and continue to enrich the program. The research and education plans may be subsequently altered by mutual consent of SREC and majority of Consortium Members.