



Division of Research
Office of the Vice President
777 Glades Road
Boca Raton, FL 33431
Tel: 561.297.0777
Fax: 561.297.2319
www.fau.edu/research

June 19, 2007

Dr. Ravi Shankar
Center for Systems Integration
College of Engineering and Computer Science
Florida Atlantic University

Re: Division of Research -- Annual Review of Institutes and Centers -- FY 05-06

Dear Dr. Shankar,

As the Vice President for Research, one of my many responsibilities is the oversight of Florida Atlantic University's 48 Institutes and Centers. In addition to the Florida Board of Governors' electronic review process, each Institute and Center is required to complete an internal review form. This spring, the University Research Committee (URC) completed an assessment of each Institute/Center submission.

The review consisted of evaluating the following areas:

1. - Institute/Center's contribution to the mission of the university
2. - Organizational structure
3. - Collaboration with other institutions of higher education, programs, and Institutes/Centers
4. - Publications, services, and activities of the Institute/Center
5. - Contributions to the University and academic community
6. - Financial performance of the Institute/Center
7. - Upcoming plans and goals

The reviewers used the ratings of 5 = Excellent, 4 = Above Satisfactory, 3 = Satisfactory, 2 = Marginally Satisfactory, and 1 = Unsatisfactory or No Report Submitted, to evaluate the Institutes/Centers. Overall, FAU has much to be proud of with regard to its Institutes/Centers. Your Institute/Center has received an overall rating of **Above Satisfactory**. I commend you and each of your staff on your wonderful successes. Attached you will find a copy of the URC's comments regarding your Institute/Center.

If you have any questions regarding the above, please feel free to contact me at X7-0268.

Sincerely,

Larry F. Lemanski, Ph.D.
Vice President for Research

Attachment
LFL/pc

cc: F. Brogan
J. Pritchett
H. Hanson
P. Liehr
K. Stevens

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**Division of Research
University Research Committee**

Institute/Center Review - Fiscal Year 2005-2006

Center Name: Center for Systems Integration

Director: Dr. Ravi Shankar

Rating scale: 1 = Unsatisfactory 2 = Marginally Satisfactory 3 = Satisfactory 4 = Above Satisfactory 5 = Excellent

| | Evaluation Areas | Rating | | | | |
|---|---|--------|---|-----|------------|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 1 | Institute/Center's contribution to the mission of the university | | | | 4.7 | |
| 2 | Organizational structure | | | | 4.3 | |
| 3 | Collaboration with other institutions of higher education, programs, and Institutes/Centers | | | 3.3 | | |
| 4 | Publications, services, and activities of the Institute/Center | | | | 4.7 | |
| 5 | Contributions to University and academic community | | | | 4.7 | |
| 6 | Financial performance of the Institute/Center | | | | 4.3 | |
| 7 | Upcoming plans and goals | | | | 4.3 | |
| 8 | Overall performance | | | | 4.7 | |

Comments:

- Need to tie the mission of the Center into the FAU mission/values/vision.
- A summary of up-coming goals is needed. Even if it is an attachment of some kind from a report you have written or proposals you are submitting, documentation is necessary in paper form.
- Members are active scholars with an impressive list of publications, and all is funded outside of FAU—well done.

Recommendations for Future Actions:



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**2005-2006 Division of Research
Annual Review of Institutes/Centers**

Dean's Acknowledgement Memo

Date: 3/12/07

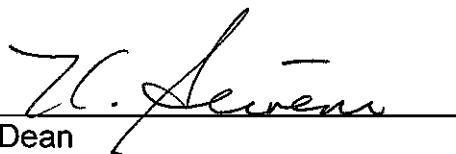
Institute/Center Name: Center for Systems Integration

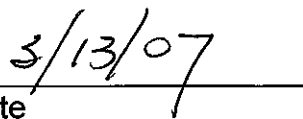
Institute/Center Type: U

Director's Name: Ravi Shankar

After reviewing the above Institute/Center report, please sign and return this memo to The Division of Research, AD 247, Boca Raton Campus, or fax it to 561-297-2319, Attn: Patrice Cochran.

I have reviewed the above Institute/Center's annual report. Please proceed with the DoR Annual Review.


Dean


Date

Florida Atlantic University
 Division of Research
 Annual Review of Centers/Institutes
 Fiscal Year 2005-2006

| Center/Institute Name | Type | Director | E-mail | Extension |
|--------------------------------|------|--------------|------------------|-----------|
| Center for Systems Integration | IV | Ravi Shankar | ravi@cse.fau.edu | 7-3470 |

| Center/Institute Address(s) |
|--|
| 777 Glades Road, Bldg. 43/Room 417 Boca Raton, FL 33431 |

Please provide the following information by March 16, 2007:

1. Date of Formation of the Center/Institute 11/9/95(Formerly called Center for VSLI and Systems Integration)
2. Website Address of the Center/Institute www.csi.fau.edu
3. Website Last Updated 2/24/07
4. State the mission of the Center/Institute and relate it to the FAU Mission (see, for example, <http://www.fau.edu/strategicplan/>).

The Center for Systems integration provides a state-of-the-art center for multidisciplinary research, teaching and training with a component of service and nucleating beneficial economical activities. The Center's focus is on emerging technologies for real-time embedded system modeling, co-design, co-verification and integration. The Center is envisioned to provide a collaborative environment that induces individual performance and rewards excellence for both university and industry participants, and to contribute to a research and development infrastructure in South Florida. See www.csi.fau.edu

5. Provide a description of the Center/Institute internal structure and/or organization chart (home college/department/division, center faculty, associated faculty, staff, titles phone number, and location). Indicate personnel directly funded by the center/institute

It is a college wide center in the college of engineering and computer science. At present, we are in the 5th year of funding from Motorola. This project involves collaboration among computer science, computer engineering, and electrical engineering faculty and students. There are six faculty members, 1 visiting scholar, 5 undergraduates, 1 PhD student, and 5 graduate students affiliated with the center. It is a loose association, with all the faculty members and the students continuing to have primary affiliation with their respective departments.

6. List all other centers/institutes, and programs within FAU that are associated with the center/institute

None

7. List all other institutions of higher education associated with the Center/Institute

None

8. Provide an executive summary of the Center's/Institute's activities, services, and achievements in the past fiscal year. Include supporting documentation.

We are in the 5th year of funding from Motorola on a project entitled "One Pass to Production." Over the past one year, we have published about 15 conference and journal publications:

1. Agarwal, A., Hamza-Lup, G., Ansley, J., and Shankar, R., "An Integrated Methodology for QoS Driven Reusable Component Design and Component Selection," First IEEE Systems Conference, Hawaii, April 2007 (accepted)
2. Islam, S., Shankar, R., and Choi, J.P., "Unified Test Environment-Integrated Platform for Bridging the Modeling, Testing and Code Development Flow," First IEEE Systems Conference, Hawaii, USA, April 2007 (accepted)
3. Cardei, I., Fonoage, M., and Shankar, R., "Framework for Requirements-Driven System Design Automation," First IEEE Systems Conference, Hawaii, April 2007 (accepted)
4. Mattu, B.S., and Shankar, R., "Test Driven Design for Component Based Systems," First IEEE Systems Conference, Hawaii, April 2007 (accepted)
5. Shankar, R., and Borrás, J., "Radical Productivity Improvement with One Pass to Production (OPP)," First IEEE Systems Conference, Hawaii, April 2007 (accepted)
6. Shankar, R., Kalva, H., and Agarwal, A., "Automation Methods and Application Abstraction," IEEE International Conf. on Portable Information Devices, Orlando, March 2007
7. Kalva, H., Shankar, R., Patel, T., and Cruz, C., "Resource Estimation Methodology for Multimedia Applications," MMCN, CA, Feb 2007
8. Agarwal, A., and Shankar, R., "A NOC Design Methodology: A Layered Architecture," Intl. Journal of Computer Science and Engineering, CSSE, Accepted for publication, 2007.
9. Agarwal, A., Mustafa, M., and Shankar, R., QOS- Driven Network on Chip Design, Intl. J of Circuits, Systems, and Computation, Accepted for publication, August 2006

10. Agarwal, A., and Shankar, R., A Concurrency Model for Network on Chip Design Methodology, Intl. J of Modeling and Simulation, Accepted for Publication, May 2006
11. Agarwal, A., Shankar, R., and Kovalski, F., Modeling Concurrency on NOC Architecture with Symbolic Language: FSP, IEEE International Conf on Symbolic Methods and Applications to Circuit Design, October 2006
12. Agarwal, A., and Shankar, R., Modeling Concurrency in NOC for Embedded Systems, High Performance Embedded Computing (HPEC) Workshop at MIT Lincoln Laboratory, Boston, MA, 19 - 21 September 2006
13. Jain, A., and Shankar, R., Software Decomposition for Multicore Architectures, High Performance Embedded Computing (HPEC) Workshop at MIT Lincoln Laboratory, Boston, MA, 19 - 21 September 2006
14. Selvan, V., and Shankar, R., "Comparison of Specification Languages and Tools," Accepted for Publication, UTC Telecom Conference, Tampa, FL, May 2006.
15. Shankar, R., " High Speed Scaleable Multiplier," US Patent Application No. 20030105792, FAU filing, December 2001, Published January 2005, Patent Granted, April 2006.

9. Describe the Center's/Institute's contributions to the University and to the local, national, and international academic communities as appropriate.

We work closely with Motorola in addressing a key issue for US economic advantage: productivity. Our work is applicable equally well to other areas such as DOD, Medicine, Homeland Security, and other areas where the systems are becoming increasingly complex and quicker deployment is becoming a necessity. We use many state-of-the-art advances in other fields to build a viable framework for rapid product development

10. Provide a brief description of the Center/Institute financial performance over the past fiscal year.

We have been funded at about \$250,000 per year for the past four years. Our fifth year of funding started this spring.

11. List of the Center/Institute grants, contracts and other donations for the current fiscal year (use additional sheets as needed. NOTE: This listing pertains to active awards. Summaries for the past year and expectations will also be obtained from the information filed with the Florida Board of Governors.)

| Agency | FAU Account # (Banner Index/Org) | Direct Amount | Indirect Amount | Total Amount |
|----------|-------------------------------------|------------------|--------------------|-----------------|
| Motorola | 670208/B16044 | 77,163 | 23,218 | 100,391 |
| Motorola | 670214/B16044 | 95,029 | 24,084 | 119,113 |
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