FLORIDA ATLANTIC UNIVERSITY
Department of Computer & Electrical Engineering and Computer Science

ANNUAL FACULTY EVALUATION 2010-2011
Research Plan for 2011-2012

Name and Rank: Bassem Alhalabi, Associate Professor **Date:** April 25, 2011

Department and College: Computer & Electrical Engineering and Computer Science
College of Engineering and Computer Science

A. Teaching

1. Please list all the courses taught during each semester and include results of the course evaluations.

COURSES TAUGHT	Number of students responded	Percent responded	Quality of Instruction (#20) and Rating of the instructor (#21)
Spring 2010 courses			
CDA 3331 Intro Microprocessor Sys	37	82.2	1.4/1.5
EGN 4411 Engineering Design 2	11	78.6	1.8/2.2
CDA 6316 Embedded Systems 1	10	90.9	1.7/1.9
Summer 2010 courses			
None			
Fall 2010 courses			
CDA 3201 Intro to Logic Design	45	76.3	1.3/1.4
CDA 4630 Intro Embedded Sys	15	71.4	2.1/1.8
Spring 2011 courses			
CDA 3331 Intro Microprocessor Sys	Not		
EGN 4411 Engineering Design 1	in		
CDA 6316 Embedded Systems 1	yet		

Please, include copies of "Student Perception of Teaching" summary forms for each class.
See Appendix 1.

2. Doctoral and Master's Degree Committees

a) Number of doctoral committees chaired to completion: **0** _____
List student names:

b) Number of doctoral committees currently chaired: **2** _____
List student names: **Ricardo Castellanos, Eric Shufro**.

c) Participation in doctoral committees: **7** _____
List student names: **Ahmad AbuShanab, Victor Herrera , Ali Al-Kazimi, Randall Wald, Wilker Altidor, Janell Duhaney, Wael Awada**.

d) Number of master's degree committees chaired to completion: **0** ____
List student names:

e) Number of master's degree committees currently supervised: **2** _____
List student names: **Abishek Duraiswamy, Joseph Gundel**

f) Participation in master's degree committees: **2** _____
List student names: **Ernesto Cividanes, Sebastian Posses**

3. Peer Evaluation

Include the Peer-evaluation Report (if available)

B. Research & Other Creative Activities (May 1, 2010 – May 1, 2011)

1. List all publications during the last calendar year:

Classify papers as follows:

(a) Book chapter,
(b) Journal papers (published),
(c) Conference papers (published), 4

- Duhaney, J., Khoshgoftaar, T.M., Cardei, I., Alhalabi, B. and Sloan, J., "Applications of Data Fusion in Monitoring Inaccessible Ocean Machinery." Proceedings of the 16th ISSAT International Conference on Reliability and Quality in Design, Washington, D.C., August 5-7, 2010, pp. 318-323.
- Sloan, J., Khoshgoftaar, T.M., Alhalabi, B. "A Strategy for Data-Driven Testing of an Ocean Turbine Drivetrain." Proceedings of the 17th ISSAT International Conference on Reliability and Quality in Design, Vancouver, BC, Canada, August 4-6, 2011. In Press.
- Ionut Cardei, Ankur Agarwal, Bassem Alhalabi, Timur Tavtilov, Taghi Khoshgoftaar, Pierre-Philippe Beaujean, “Software and Communications Architecture for Prognosis and Health Monitoring of Ocean-based Power Generator”, Conference on Systems Engineering, 2011
- Chad Calvert, Georgiana Hamza-Lup, Ankur Agarwal, Bassem Alhalabi “An Integrated Component Selection for System Level Design”, IEEE Conference on Systems Engineering, 2011

(d) Other publications (published),

- Follow up on 3 Medical white papers submitted for potential patent applications.

(e) Submitted papers, pending,

2. List all research grants during the last academic year:

Classify research grants as (a) received grants, (b) submitted, but pending, (c) submitted but rejected. Indicate the title of the grant, type of the grant (Research, Equipment, or Service) your role (PI, co-PI, or Investigator), the amount, time period, and grantor.

(a) received grants,

- CGC, ($50,000 Grant) (Granted Aug 2010, Jul 2011)
  - PI: Ankur Agarwal
  - **CoPI: Bassem Alhalabi**
  - Title: Android Application Development
- FAU, Ocean Engineering, ($145,919 Grant) (Granted Jan 2010, Dec 2011)
  - **PI: Bassem Alhalabi**
  - CoPI: Ankur Agarwal
  - Title: MCM and Prognostics Monitoring

(b) submitted, and pending,

- First Light Wave, Inc., FL. ($185,000 Grant) (submitted and pending 2010)
  - **PI: Bassem Alhalabi**
  - CoPI: Ankur Agarwal
  - Title: obNeo Software Development
  - Purpose: build a medical training software
- Louis Soto, FL. ($97,786 Grant) (submitted and pending 2010)
  - **PI: Bassem Alhalabi**
  - Title: Chemotherapy Waste System
  - Purpose: build a prototype for a patented invention.

(c) submitted, and rejected,

- Various efforts with local industries and inventors

3. List participation in meetings of professional societies, special seminars, or other professional activities:

- Local Arrangement Co-Chair, 23rd IEEE International Conference on Tools with Artificial Intelligence, Nov. 7-9, 2011, Boca Raton, Florida, USA
- Local Arrangement Co-Chair, The 13th IEEE International High Assurance Systems Engineering Symposium, Boca Raton, FL. Nov 10th to 12th, 2011.
- Served as judge for science and engineering projects from middle- and high-school student, Florida Science Olympiad, February 18, 2011.

- Technical paper reviews (JNM/906237) for the Journal of Nanomaterials, Jan 14, 2011.
- Technical paper reviews (sensors-7203) for the Sensors (ISSN 1424-8220; CODEN: SENSC9), March 3, 2011.
- IEEE Palm Beach Section Executive Committee, Boca Raton, Florida, IEEE, (Quarterly meeting).

4. List other items of significance such as awards, prizes, and special recognition by professional community, etc.:

- I could have applied for the Tech of the Year, but did not have time.

5. Student advising activities.

- Not Applicable.

C. Service

1. List membership and chairmanship on all committees, indicating the time spent in each during last year:

- Member, College of Engineering, 2010 and beyond, 2010-current
- Member, CEECS Personnel Committee, 2007-2009
- Member, CEECS Teaching and Graduate Assistants Committee, 2008-2010
  - Selecting the best 5 of the candidate TA's to serve the Logic Design and Microprocessor lab.
  - Identifying the best of the 5 TA's and training him/her to be the super TA and manage the other TA's and the lab in general.
- Member, CEECS Undergraduate Program Committee, 2008-2010
- Chair, CEECS CE Undergraduate Program Committee, 2008-2010
  - Evaluating the program at large and looking into the contest of the many courses we offer in the upper division.
  - I am in a constant process to modernize the Hardware courses including Logic Design, Microprocessor, and Computer architecture…
  - Various computer boards and other hardware and software tools were purchased to modernize the CSE Computer Engineering courses
- Member, CEECS Laboratory and Equipment Committee, 1996-2010
  - I revised and update the Intro to Embedded Systems, CDA 4630, to serve as a prerequisite for the ED I/II design sequence. This course helps our CE students become much more valuable to the ED design teams by leaning so much hands-on on the computer interface and the software/hardware interaction.
  - Continuous management of all hardware labs.
- Member, CEECS ABET/SACS Committee, 2008-2010

2. List other service activities

- Serving students at the college level with all kinds of hands-on assistance

with their college projects.

D. Other University Duties (where applicable)

1. **Describe duties:**
   - Member, FAU University Faculty Council Committee on Academic Freedom, FAU, 1998-Current
   - Member, UFF Executive Committee, FAU, 2005-Current
   - Advisor, FAU Muslim Student Organization
   - Member, FAU Diversity Committee

2. **Evaluation by appropriate official:**

Include your latest resume

See Appendix 2.

RESEARCH PLAN FOR 2011-12

Present your academic plan:

(1) Plan to develop and offer new courses: title, semester, U or G

- **I have been teaching my Embedded Systems Classes for more than 10 years, and every year it is different. I always keep it up to date using the latest in the technology. I have covered so many topics under embedded systems, while other professors keep changing their courses and/or introducing new courses with new buzz words. I am really confused about the idea of "new HOT courses".**

(2) Plan to develop online course: title, time schedule

- **Not yet**

(3) Other creative activities relating to academics

- **I am working with some ED students to create some state-of-the-art show cases in the new green building.**

Present your detailed research plan including detailed information on:

(1) Funded projects and potential buy-outs

- **Few active projects with industry**

- **Continue Ocean Energy Research**

(2) Ph.D. and Master students to be supervised

- **PhD: Continuing and New, (9):**
- **Master: Continuing and new (5):**

(3) Potential publications (journal, conference, etc.)

- **Continue to publish under Ocean Energy research**

(4) Proposals to be submitted (Tentative titles, Tentative amount, Agency/Industry, Your role (PI, Co-PI, etc.)

- NSF, ($350K Grant Proposal) (under preparation for Fall 2011)
  - **PI: Bassem Alhalabi**
  - Title: Development of On-line, Remote Lab Exercises for General Physics I and II Courses
  - Purpose: To establish a research and development environment for engineering remote laboratories.

- NIH, ($350K Grant Proposal) (under preparation for Fall 2011)
  - **PI: Bassem Alhalabi**
  - Title: AutoMom
  - Purpose: To develop Medical Devices to improve health and well being of Autistic Children.

- I am constantly trying to bring individual (inventors) and industrial projects through FAU. Currently, I have a local company trying to develop safely system for police cars, and another company trying to develop a safety system for children.

Appendix 1

FAU

Florida Atlantic University
Student Perception of Teaching

TERM Spring 2010 **COURSE/SECTION** CDA3331C 002 11563 **NUMBER ENROLLED** 45

CAMPUS Boca Raton **TITLE** Intro Microprocessor Systems **NUMBER RESPONDED** 37

INSTRUCTOR Alhalabi Bassem A **% RESPONDED** 82.2

COLLEGE Coll Engineering Computer Sci

DEPARTMENT Computer Science & Engineering

All if the items on this questionnaire with the exception of 16, 17 and are required by Board of Regeant's Policy and will be made public.	COMPLETELY AGREE	SOMEWHAT AGREE	SOMEWHAT DISAGREE	COMPLETELY DISAGREE	NO RESPONSE	MEAN
1. Clearly stated the objectives of the course	91.9	8.1	.0	.0	.0	1.1
2. Covered what was stated in the course objectives	94.6	5.4	.0	.0	.0	1.1
3. Was organized and prepared for class	91.9	2.7	5.4	.0	.0	1.1
4. Communicated ideas effectively	94.6	5.4	.0	.0	.0	1.1
5. Told students how they would be evaluated	97.3	2.7	.0	.0	.0	1.0
6. Gave assignments that assisted in learning the material	97.3	.0	2.7	.0	.0	1.1
7. Gave useful feedback on coursework	83.8	8.1	2.7	5.4	.0	1.3
8. Made the subject interesting	91.9	5.4	2.7	.0	.0	1.1
9. Encouraged students to think critically	100.0	.0	.0	.0	.0	1.0
10. Was willing to listen to students' questions and opinions	94.6	5.4	.0	.0	.0	1.1
11. Was available during office hours or appointment times	83.8	10.8	5.4	.0	.0	1.2
12. Showed respect for students	94.6	2.7	.0	2.7	.0	1.1
13. Was concerned with whether students learned	94.6	5.4	.0	.0	.0	1.1
14. Was interested in teaching	100.0	.0	.0	.0	.0	1.0
15. Gave exams that reflected the material covered	97.3	2.7	.0	.0	.0	1.0

16. How difficult was this course for you?		17. How was the pace at which the instructor covered the material?		18. What grade to you expect to receive in this course?	
10.8	Difficult (1)	.0	Much too fast (1)	54.1	A
40.5	Somewhat difficult (2)	24.3	A little too fast (2)	32.4	B
48.6	About right (3)	75.7	About right (3)	8.1	C
.0	Somewhat easy(4)	.0	A little too slow (4)	2.7	D
.0	Very easy (5)	.0	Much too slow (5)	.0	Fail
.0	No Response	.0	No Response	2.7	Pass
2.4	Mean	2.8	Mean	.0	No Response

19. How much do you think that you have learned in this course?		20. Rate the quality of instruction as it contributed to your learning in the course.		21. What is your rating of this instructor compared to other instructors you have had?	
40.5	An exceptional amount (1)	67.6	Excellent (1)	62.2	One of the most effective (1)
35.1	More than usual (2)	24.3	Very good (2)	29.7	More effective than usual (2)
18.9	About as much as usual (3)	5.4	Good (3)	8.1	About as effective as others(3)
2.7	Less than usual (4)	2.7	Fair (4)	.0	Less effective than others (4)
.0	Almost none (5)	.0	Poor (5)	.0	One of the least effective (5)
2.7	No Response	.0	No Response	.0	No Response
1.8	Mean	1.4	Mean	1.5	Mean

Enter responses to departmental questions

	A	B	C	D	E	NR	Mean		A	B	C	D	E	NR	Mean
Question 22	.0	.0	.0	.0	.0	100.0	.0	Question 23	.0	.0	.0	.0	.0	100.0	.0
Question 24	.0	.0	.0	.0	.0	100.0	.0	Question 25	.0	.0	.0	.0	.0	100.0	.0
Question 26	.0	.0	.0	.0	.0	100.0	.0	Question 27	.0	.0	.0	.0	.0	100.0	.0
Question 28	.0	.0	.0	.0	.0	100.0	.0	Question 29	.0	.0	.0	.0	.0	100.0	.0
Question 30	.0	.0	.0	.0	.0	100.0	.0	Question 31	.0	.0	.0	.0	.0	100.0	.0
Question 32	.0	.0	.0	.0	.0	100.0	.0	Question 33	.0	.0	.0	.0	.0	100.0	.0

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Florida Atlantic University
Student Perception of Teaching

TERM Spring 2010 **COURSE/SECTION** CDA6316 001 11559 **NUMBER ENROLLED** 11

CAMPUS Boca Raton **TITLE** Embedded System Design I **NUMBER RESPONDED** 10

INSTRUCTOR Alhalabi Bassem A **% RESPONDED** 90.9

COLLEGE Coll Engineering Computer Sci

DEPARTMENT Computer Science & Engineering

All if the items on this questionnaire with the exception of 16, 17 and are required by Board of Regeant's Policy and will be made public.	COMPLETELY AGREE	SOMEWHAT AGREE	SOMEWHAT DISAGREE	COMPLETELY DISAGREE	NO RESPONSE	MEAN
1. Clearly stated the objectives of the course	80.0	10.0	10.0	.0	.0	1.3
2. Covered what was stated in the course objectives	70.0	20.0	10.0	.0	.0	1.4
3. Was organized and prepared for class	50.0	40.0	.0	10.0	.0	1.7
4. Communicated ideas effectively	80.0	10.0	.0	10.0	.0	1.4
5. Told students how they would be evaluated	70.0	20.0	10.0	.0	.0	1.4
6. Gave assignments that assisted in learning the material	70.0	20.0	.0	10.0	.0	1.5
7. Gave useful feedback on coursework	70.0	20.0	.0	10.0	.0	1.5
8. Made the subject interesting	80.0	10.0	10.0	.0	.0	1.3
9. Encouraged students to think critically	80.0	10.0	.0	10.0	.0	1.4
10. Was willing to listen to students' questions and opinions	70.0	10.0	20.0	.0	.0	1.5
11. Was available during office hours or appointment times	70.0	10.0	10.0	10.0	.0	1.6
12. Showed respect for students	90.0	10.0	.0	.0	.0	1.1
13. Was concerned with whether students learned	70.0	10.0	20.0	.0	.0	1.5
14. Was interested in teaching	70.0	20.0	10.0	.0	.0	1.4
15. Gave exams that reflected the material covered	40.0	.0	.0	10.0	50.0	1.6

16. How difficult was this course for you?		17. How was the pace at which the instructor covered the material?		18. What grade to you expect to receive in this course?	
10.0	Difficult (1)	.0	Much too fast (1)	100.0	A
50.0	Somewhat difficult (2)	30.0	A little too fast (2)	.0	B
40.0	About right (3)	70.0	About right (3)	.0	C
.0	Somewhat easy(4)	.0	A little too slow (4)	.0	D
.0	Very easy (5)	.0	Much too slow (5)	.0	Fail
.0	No Response	.0	No Response	.0	Pass
2.3	Mean	2.7	Mean	.0	No Response

19. How much do you think that you have learned in this course?		20. Rate the quality of instruction as it contributed to your learning in the course.		21. What is your rating of this instructor compared to other instructors you have had?	
70.0	An exceptional amount (1)	60.0	Excellent (1)	60.0	One of the most effective (1)
20.0	More than usual (2)	30.0	Very good (2)	10.0	More effective than usual (2)
.0	About as much as usual (3)	.0	Good (3)	20.0	About as effective as others(3)
10.0	Less than usual (4)	.0	Fair (4)	.0	Less effective than others (4)
.0	Almost none (5)	10.0	Poor (5)	10.0	One of the least effective (5)
.0	No Response	.0	No Response	.0	No Response
1.5	Mean	1.7	Mean	1.9	Mean

Enter responses to departmental questions

	A	B	C	D	E	NR	Mean		A	B	C	D	E	NR	Mean
Question 22	.0	.0	.0	.0	.0	100.0	.0	Question 23	.0	.0	.0	.0	.0	100.0	.0
Question 24	.0	.0	.0	.0	.0	100.0	.0	Question 25	.0	.0	.0	.0	.0	100.0	.0
Question 26	.0	.0	.0	.0	.0	100.0	.0	Question 27	.0	.0	.0	.0	.0	100.0	.0
Question 28	.0	.0	.0	.0	.0	100.0	.0	Question 29	.0	.0	.0	.0	.0	100.0	.0
Question 30	.0	.0	.0	.0	.0	100.0	.0	Question 31	.0	.0	.0	.0	.0	100.0	.0
Question 32	.0	.0	.0	.0	.0	100.0	.0	Question 33	.0	.0	.0	.0	.0	100.0	.0

FAU

Florida Atlantic University
Student Perception of Teaching

TERM Spring 2010 **COURSE/SECTION** EGN4411C 003 11646 **NUMBER ENROLLED** 14

CAMPUS Boca Raton **TITLE** Engineering Design 2 **NUMBER RESPONDED** 11

INSTRUCTOR Alhalabi Bassem A **% RESPONDED** 78.6

COLLEGE Coll Engineering Computer Sci

DEPARTMENT Computer Science & Engineering

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1. Clearly stated the objectives of the course	81.8	.0	18.2	.0	.0	1.4
2. Covered what was stated in the course objectives	81.8	9.1	9.1	.0	.0	1.3
3. Was organized and prepared for class	63.6	18.2	18.2	.0	.0	1.6
4. Communicated ideas effectively	72.7	9.1	18.2	.0	.0	1.5
5. Told students how they would be evaluated	72.7	9.1	18.2	.0	.0	1.5
6. Gave assignments that assisted in learning the material	63.6	18.2	18.2	.0	.0	1.6
7. Gave useful feedback on coursework	72.7	18.2	9.1	.0	.0	1.4
8. Made the subject interesting	81.8	9.1	9.1	.0	.0	1.3
9. Encouraged students to think critically	81.8	9.1	9.1	.0	.0	1.3
10. Was willing to listen to students' questions and opinions	81.8	9.1	9.1	.0	.0	1.3
11. Was available during office hours or appointment times	72.7	9.1	9.1	.0	9.1	1.3
12. Showed respect for students	81.8	9.1	9.1	.0	.0	1.3
13. Was concerned with whether students learned	63.6	27.3	9.1	.0	.0	1.5
14. Was interested in teaching	72.7	9.1	18.2	.0	.0	1.5
15. Gave exams that reflected the material covered	45.5	.0	9.1	.0	45.5	1.3

16. How difficult was this course for you?		17. How was the pace at which the instructor covered the material?		18. What grade to you expect to receive in this course?	
18.2	Difficult (1)	9.1	Much too fast (1)	90.9	A
63.6	Somewhat difficult (2)	.0	A little too fast (2)	9.1	B
18.2	About right (3)	90.9	About right (3)	.0	C
.0	Somewhat easy(4)	.0	A little too slow (4)	.0	D
.0	Very easy (5)	.0	Much too slow (5)	.0	Fail
.0	No Response	.0	No Response	.0	Pass
2.0	Mean	2.8	Mean	.0	No Response

19. How much do you think that you have learned in this course?		20. Rate the quality of instruction as it contributed to your learning in the course.		21. What is your rating of this instructor compared to other instructors you have had?	
54.5	An exceptional amount (1)	54.5	Excellent (1)	45.5	One of the most effective (1)
18.2	More than usual (2)	18.2	Very good (2)	9.1	More effective than usual (2)
27.3	About as much as usual (3)	18.2	Good (3)	27.3	About as effective as others(3)
.0	Less than usual (4)	9.1	Fair (4)	18.2	Less effective than others (4)
.0	Almost none (5)	.0	Poor (5)	.0	One of the least effective (5)
.0	No Response	.0	No Response	.0	No Response
1.7	Mean	1.8	Mean	2.2	Mean

Enter responses to departmental questions

	A	B	C	D	E	NR	Mean		A	B	C	D	E	NR	Mean
Question 22	.0	.0	.0	.0	.0	100.0	.0	Question 23	.0	.0	.0	.0	.0	100.0	.0
Question 24	.0	.0	.0	.0	.0	100.0	.0	Question 25	.0	.0	.0	.0	.0	100.0	.0
Question 26	.0	.0	.0	.0	.0	100.0	.0	Question 27	.0	.0	.0	.0	.0	100.0	.0
Question 28	.0	.0	.0	.0	.0	100.0	.0	Question 29	.0	.0	.0	.0	.0	100.0	.0
Question 30	.0	.0	.0	.0	.0	100.0	.0	Question 31	.0	.0	.0	.0	.0	100.0	.0
Question 32	.0	.0	.0	.0	.0	100.0	.0	Question 33	.0	.0	.0	.0	.0	100.0	.0

FAU

Florida Atlantic University
Student Perception of Teaching

TERM Fall 2010 **COURSE/SECTION** CDA3201C 001 80866 **NUMBER ENROLLED** 59

CAMPUS Boca Raton **TITLE** Introduction To Logic Design **NUMBER RESPONDED** 45

INSTRUCTOR Alhalabi Bassem A **% RESPONDED** 76.3

COLLEGE Coll Engineering Computer Sci

DEPARTMENT Computer Science & Engineering

All if the items on this questionnaire with the exception of 16, 17 and are required by Board of Regeant's Policy and will be made public.	COMPLETELY AGREE	SOMEWHAT AGREE	SOMEWHAT DISAGREE	COMPLETELY DISAGREE	NO RESPONSE	MEAN
1. Clearly stated the objectives of the course	82.2	6.7	.0	.0	11.1	1.1
2. Covered what was stated in the course objectives	77.8	11.1	.0	.0	11.1	1.1
3. Was organized and prepared for class	48.9	28.9	8.9	2.2	11.1	1.6
4. Communicated ideas effectively	80.0	11.1	.0	.0	8.9	1.1
5. Told students how they would be evaluated	80.0	11.1	.0	.0	8.9	1.1
6. Gave assignments that assisted in learning the material	80.0	13.3	.0	.0	6.7	1.1
7. Gave useful feedback on coursework	77.8	8.9	6.7	.0	6.7	1.2
8. Made the subject interesting	84.4	8.9	.0	.0	6.7	1.1
9. Encouraged students to think critically	84.4	6.7	2.2	.0	6.7	1.1
10. Was willing to listen to students' questions and opinions	80.0	13.3	.0	.0	6.7	1.1
11. Was available during office hours or appointment times	73.3	17.8	.0	.0	8.9	1.2
12. Showed respect for students	80.0	13.3	.0	.0	6.7	1.1
13. Was concerned with whether students learned	84.4	8.9	.0	.0	6.7	1.1
14. Was interested in teaching	84.4	8.9	.0	.0	6.7	1.1
15. Gave exams that reflected the material covered	82.2	6.7	.0	.0	11.1	1.1

16. How difficult was this course for you?		17. How was the pace at which the instructor covered the material?		18. What grade to you expect to receive in this course?	
2.2	Difficult (1)	.0	Much too fast (1)	66.7	A
22.2	Somewhat difficult (2)	6.7	A little too fast (2)	26.7	B
48.9	About right (3)	86.7	About right (3)	2.2	C
17.8	Somewhat easy(4)	4.4	A little too slow (4)	.0	D
6.7	Very easy (5)	.0	Much too slow (5)	.0	Fail
2.2	No Response	2.2	No Response	2.2	Pass
3.0	Mean	3.0	Mean	2.2	No Response

19. How much do you think that you have learned in this course?		20. Rate the quality of instruction as it contributed to your learning in the course.		21. What is your rating of this instructor compared to other instructors you have had?	
60.0	An exceptional amount (1)	71.1	Excellent (1)	64.4	One of the most effective (1)
26.7	More than usual (2)	22.2	Very good (2)	24.4	More effective than usual (2)
11.1	About as much as usual (3)	2.2	Good (3)	8.9	About as effective as others(3)
.0	Less than usual (4)	2.2	Fair (4)	.0	Less effective than others (4)
.0	Almost none (5)	.0	Poor (5)	.0	One of the least effective (5)
2.2	No Response	2.2	No Response	2.2	No Response
1.5	Mean	1.3	Mean	1.4	Mean

Enter responses to departmental questions

	A	B	C	D	E	NR	Mean		A	B	C	D	E	NR	Mean
Question 22	4.4	.0	.0	.0	.0	95.6	1.0	Question 23	2.2	2.2	.0	.0	.0	95.6	1.5
Question 24	4.4	.0	.0	.0	.0	95.6	1.0	Question 25	4.4	.0	.0	.0	.0	95.6	1.0
Question 26	4.4	.0	.0	.0	.0	95.6	1.0	Question 27	4.4	.0	.0	.0	.0	95.6	1.0
Question 28	4.4	.0	.0	.0	.0	95.6	1.0	Question 29	4.4	.0	.0	.0	.0	95.6	1.0
Question 30	4.4	.0	.0	.0	.0	95.6	1.0	Question 31	4.4	.0	.0	.0	.0	95.6	1.0
Question 32	4.4	.0	.0	.0	.0	95.6	1.0	Question 33	4.4	.0	.0	.0	.0	95.6	1.0

FAU

Florida Atlantic University
Student Perception of Teaching

TERM Fall 2010 **COURSE/SECTION** CDA4630 001 80863 **NUMBER ENROLLED** 21

CAMPUS Boca Raton **TITLE** Intro to Embedded Systm Design **NUMBER RESPONDED** 15

INSTRUCTOR Alhalabi Bassem A **% RESPONDED** 71.4

COLLEGE Coll Engineering Computer Sci

DEPARTMENT Computer Science & Engineering

All if the items on this questionnaire with the exception of 16, 17 and are required by Board of Regeant's Policy and will be made public.	COMPLETELY AGREE	SOMEWHAT AGREE	SOMEWHAT DISAGREE	COMPLETELY DISAGREE	NO RESPONSE	MEAN
1. Clearly stated the objectives of the course	86.7	.0	13.3	.0	.0	1.3
2. Covered what was stated in the course objectives	80.0	6.7	13.3	.0	.0	1.3
3. Was organized and prepared for class	73.3	6.7	13.3	6.7	.0	1.5
4. Communicated ideas effectively	80.0	13.3	.0	6.7	.0	1.3
5. Told students how they would be evaluated	86.7	13.3	.0	.0	.0	1.1
6. Gave assignments that assisted in learning the material	80.0	13.3	.0	6.7	.0	1.3
7. Gave useful feedback on coursework	80.0	13.3	.0	6.7	.0	1.3
8. Made the subject interesting	93.3	6.7	.0	.0	.0	1.1
9. Encouraged students to think critically	86.7	13.3	.0	.0	.0	1.1
10. Was willing to listen to students' questions and opinions	93.3	6.7	.0	.0	.0	1.1
11. Was available during office hours or appointment times	80.0	6.7	6.7	6.7	.0	1.4
12. Showed respect for students	80.0	13.3	6.7	.0	.0	1.3
13. Was concerned with whether students learned	86.7	13.3	.0	.0	.0	1.1
14. Was interested in teaching	86.7	6.7	6.7	.0	.0	1.2
15. Gave exams that reflected the material covered	66.7	6.7	.0	.0	26.7	1.1

16. How difficult was this course for you?		17. How was the pace at which the instructor covered the material?		18. What grade to you expect to receive in this course?	
6.7	Difficult (1)	6.7	Much too fast (1)	86.7	A
60.0	Somewhat difficult (2)	26.7	A little too fast (2)	13.3	B
33.3	About right (3)	66.7	About right (3)	.0	C
.0	Somewhat easy(4)	.0	A little too slow (4)	.0	D
.0	Very easy (5)	.0	Much too slow (5)	.0	Fail
.0	No Response	.0	No Response	.0	Pass
2.3	Mean	2.6	Mean	.0	No Response

19. How much do you think that you have learned in this course?		20. Rate the quality of instruction as it contributed to your learning in the course.		21. What is your rating of this instructor compared to other instructors you have had?	
53.3	An exceptional amount (1)	33.3	Excellent (1)	46.7	One of the most effective (1)
26.7	More than usual (2)	46.7	Very good (2)	40.0	More effective than usual (2)
13.3	About as much as usual (3)	6.7	Good (3)	6.7	About as effective as others(3)
.0	Less than usual (4)	6.7	Fair (4)	.0	Less effective than others (4)
6.7	Almost none (5)	6.7	Poor (5)	6.7	One of the least effective (5)
.0	No Response	.0	No Response	.0	No Response
1.8	Mean	2.1	Mean	1.8	Mean

Enter responses to departmental questions

	A	B	C	D	E	NR	Mean		A	B	C	D	E	NR	Mean
Question 22	.0	.0	.0	.0	.0	100.0	.0	Question 23	.0	.0	.0	.0	.0	100.0	.0
Question 24	.0	.0	.0	.0	.0	100.0	.0	Question 25	.0	.0	.0	.0	.0	100.0	.0
Question 26	.0	.0	.0	.0	.0	100.0	.0	Question 27	.0	.0	.0	.0	.0	100.0	.0
Question 28	.0	.0	.0	.0	.0	100.0	.0	Question 29	.0	.0	.0	.0	.0	100.0	.0
Question 30	.0	.0	.0	.0	.0	100.0	.0	Question 31	.0	.0	.0	.0	.0	100.0	.0
Question 32	.0	.0	.0	.0	.0	100.0	.0	Question 33	.0	.0	.0	.0	.0	100.0	.0

Appendix 2

BASSEM A. ALHALABI
Associate Professor

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Toll-free 1888-4BASSEM
alhalabi@fau.edu, http://www.cse.fau.edu/~bassem

Education

Ph.D. in Computer Engineering
Majored in Artificial Neural Network Architectures and Parallel Processing
University of Louisiana at Lafayette (ULL), Lafayette, Louisiana, May 1995
Ph.D. Dissertation: "A Hybrid Chip Set Architecture for Artificial Neural Network Systems With On-Chip Learning And Refreshing" (Copyrighted, U.S. Patent # 5,781,702)

Master of Science in Computer Engineering
Majored in Parallel Processing
University of Louisiana at Lafayette (ULL), Lafayette, Louisiana, December 1993

Master of Science in Electrical Engineering
Majored in Automatic Control and Robotics
Purdue University (PU), W. Lafayette, Indiana, December 1986
Master Thesis: "Digital and Analog Circuit Designs for Robot Axis Controllers"

Bachelor of Science in Electrical Engineering
Majored in Microprocessors and Digital Systems
Ohio University (OU), Athens, Ohio, December 1984

Academic Awards and Recognition

- Award for Excellence in Undergraduate Teaching, 2007/2008, Florida Atlantic University. Presented at FAU annual convocation.
- Distinguished Teacher of the Year, 2006, FAU CSE Department. Selected by students and nominated to the College.
- Award for Excellence in Undergraduate Teaching, 2002/2003, College of Engineering, Florida Atlantic University. Presented by Dean of Engineering.
- Awarded FAU Tenure and Promotion to Associate Professor, 2002. Approved by Florida Board of Education on May 14, 2002.
- Outstanding Contribution and Commitment to serve students, Florida Atlantic University. Presented by FAU Student Government, March 23, 2002..
- Award for Excellence in Undergraduate Teaching, 2001/2002, College of Engineering, Florida Atlantic University. Presented by Dean of Engineering.

- The 5th year Service award, March 26, 2002, Florida Atlantic University. Presented by FAU Provost at the annual honor reception.
- Most Outstanding Professor of the Year, 2001, Florida Atlantic University. Presented by FAU Student Government as a part of Student Appreciation Awards.
- Distinguished Teacher on the Year, 2001, FAU CSE Department. Selected by students and nominated to the College.
- Faculty Leadership Talon Award, 2000, One of the three Finalist, Florida Atlantic University. Presented by FAU Provost.
- Distinguished Service Award, 2000/2001, Florida Atlantic University. Presented by FAU Muslim Student Organization.
- Outstanding Community Contribution and Dedication, 2000, Florida Atlantic University. Presented by FAU Muslim Student Organization at the First Annual Scholar Night.
- Award for Excellence in Undergraduate Teaching, 1998/1999, Florida Atlantic University. Presented by FAU Provost.
- National Dean's List, 1982-83.
- Ohio University Dean's list, 1983.
- Award for Outstanding Academic Achievement, Ohio University, 1983.

Special Recognition

- Appreciation and Special Thanks for Sharing Time and Talents, Florida Atlantic University. Presented by FAU Student Government at their annual festival, 2004.
- Certificate of Appreciation for Ramadhan Breakfast and Mini-Lecture Evenings, FAU 2004. Presented by FAU Student Government, Nov. 9, 2004.
- Listed in "Outstanding People of the 20th Century", 1999. Compiled by The International Biographical Center of Cambridge, England, Mid 1999.
- Member of International Who’s Who of Professionals

Honor Societies

- Honorary member of the Golden Key International Honor Society
- Member of Tau Beta Pi
- Member of Upsilon Pi Epsilon
- Member of Phi Kappa Phi

Professional Associations

- Member of UFF, United Faculty of Florida, Executive Committee
- Member of IEEE, Institute of Electrical and Electronic Engineering
- Member of IEEE CS, IEEE Computer Society,

- Member of IEEE Palm Beach Section Executive Committee,
- Member of ASEE, the American Society for Engineering Education
- Member of NEA, the National Education Association
- Member of ACM, Association of Computing Machines
- Member of NI, National Instruments LabVIEW software users group
- Member of SFEDG, South Florida Embedded Systems Group
- Member of ACA, American Creativity Association

Teaching Interests

- **Web-Based Controls and Automation Systems**
- **Embedded Systems and Microcontrollers**
- **Logic Design, Digital Systems, Computer Organizations and Architectures**
- Fault Tolerance, Design for Testability, Built-in Self Testing

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Research Interests

- **Distance Education Technologies and Remote Laboratories**
- **Web-Based Controls and Automation Systems**
- **Embedded Systems and Microcontrollers**
- Parallel Processing Topologies and Architectures
- Digital and Analog VLSI Circuits and Systems,
- Hybrid Artificial Neural Networks

Work Experience

- **(8 Y) Associate Professor, August 2002-Current, Computer Science and Engineering (CSE), Florida Atlantic University (FAU)**
- **(9 Y) Director, 2001-Current, Center for the Advancement of Distance Education Technologies (CADET), Florida Atlantic University (FAU), CADET is a category III center. It is a collaborative research and development efforts between the College of Engineering and the College of Education.**
- (6 Y) Assistant Professor, August 1996-2002, Computer Science and Engineering (CSE), Florida Atlantic University (FAU)
- (3 Y) Co-Director/Co-Founder, 1998-2001, Florida Atlantic University (FAU). Established the Center for the Innovative Distance Education Technologies (CIDET). Name of the center was later changed to CADET.
- (1 Y) Visiting Assistant Professor, Sep 1995-Aug 1996, Electrical and Computer Engineering (ECE), University of South Alabama (USA)

- (5 Y) Research Assistant and VLSI Lab Manager, Jan 1990-Aug 1995, Center for Advanced Computer Studies (CACS), University of Southwestern Louisiana (USL). Research included design and simulation of Hybrid Chip Set Architecture for Neural Networks Systems with on-Chip Learning and Refreshing (Ph.D. Dissertation). Taught courses and lectures in Compute Science and Engineering areas. Lab duties included general lab setup, maintenance, and management and crush courses.
- (1 Y) Research Assistant, 1989-1990. Computer Science and Engineering Department (CSEE), University of South Florida (USF). Worked on DARPA FFT Wafer Scale Integration Project, Task 5. Duties included VLSI circuit designs, fault-tolerant and built-in-self-testing architectures.
- (3 Y) Electrical and Computer Engineer/Manager, 1987-1990. Alhalabi Industries Inc., Damascus Syria (AII is an industrial and consumer R&D company). Duties included designing, prototyping, and testing of multidisciplinary industrial and consumer projects dealing with analog, digital, software, control, packaging, mechanical, materials, and printing.
- (2 Y) Teaching Assistant and Robotics Lab Coordinator, Jan 1985-Dec 1986. Electrical Engineering Department (ECE), Purdue University (PU). Research included design with prototype a 68000-base multiprocessor midsize 6-axis robot system controller (MS thesis Project). Lab duties included general lab setup, update, maintenance, and management.
- (1.5 Y) Teaching Assistant and Technician, 1983-1984. Electrical Engineering Department (EE), Ohio University (OU). Taught a senior lab course and maintained lab equipment.

Professional Activities

Current Responsibilities

- President and CEO of R&D G's Inc., a start-up R&D company based in Boca Raton. Feasibility analysis, design, and prototyping of consumer technology products. This effort is mainly in the evening and weekend time.
- Member, Executive Committee of IEEE Palm Beach Section.

Annual Activities

2011

- **Local Arrangement Co-Chair,** 23rd IEEE International Conference on Tools with Artificial Intelligence, Nov. 7-9, 2011, Boca Raton, Florida, USA
- **Local Arrangement Co-Chair,** The 13th IEEE International High Assurance Systems Engineering Symposium, Boca Raton, FL. Nov 10th to 12th, 2011.
- Served as judge for science and engineering projects from middle- and high-school student, Florida Science Olympiad, February 18, 2011.

- Technical paper reviews (JNM/906237) for the Journal of Nanomaterials, Jan 14, 2011.
- Technical paper reviews (sensors-7203) for the Sensors (ISSN 1424-8220; CODEN: SENSC9), March 3, 2011.

2010

- Special computer engineering session for kids ages 8-12. Special class offered for Summer Youth College program at PBCC, June 29, 2010.

2009

- Special computer engineering session for kids ages 8-12. Special class offered for Summer Youth College program at PBCC, July 14, 2009.
- Technical paper reviews for the IEEE ISCAS2010 conference, 2010.

2008

- Publication Chair, The 6th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-08), Doha, Qatar, April 1-4, 2008.
- Special computer engineering session for kids ages 8-12. Special class offered for Summer Youth College program at PBCC, July 8, 2008.
- Special computer engineering session for kids ages 8-12. Special Day offered for Summer Youth Program at Garden of the Sahaba Academy, July 10, 2008.
- Special session for autistic kids ages 5-8. I helped the kids understand the concept of solar energy and made them build a grasshopper toy which constantly hops due a motor rotation powered by a solar cell. The class offered for Summer program at Sandpipers Shore Elementary School. July 11, 2008.

2007

- Publication Chair, The 6th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-08), Doha, Qatar, April 1-4, 2008.
- IEEE Palm Beach Section Executive Committee, Boca Raton, Florida, IEEE, (Quarterly meeting).
- Special computer engineering and embedded systems for kids ages 8-12. Special class offered for Summer Youth College program at PBCC, July 18, 2007.

2006

- IEEE Industrial Electronics Society, publication reviewer.
- Consulting for a consumer company, designing FRID employee tracking system (Confidential material).
- Consulted for a consumer company, designing a wireless remote control for a swimming pool controller.
- IEEE Palm Beach Section Executive Committee, Boca Raton, Florida, IEEE, (Quarterly meeting).
- May 16, 2006, attended a full-day Freescale seminar on ColdFire microcontroller. It is a RISC engine for embedded systems with web-server application.
- National Instruments LabVIEW software users group, NI Academic, (Quarterly).
- South Florida Embedded Systems Group Meetings, SFEDG, (Monthly).

2005

- Founded R&D G's Inc., a start-up R&D company based in Boca Raton. Feasibility analysis, design, and prototyping of consumer technology products.
- Technical Program Chair, International Conference on Systems, Computing Sciences and Software Engineering (SCS2 05), December 10-20, 2005. A conference of the International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CIS2E 05), Sponsored by IEEE and University of Bridgeport.
- Textbook Review, "*Digital Design*" By Frank Vahid, first edition, John Wiley & Sons, 2005.
- IEEE Palm Beach Section Executive Committee, Boca Raton, Florida, IEEE, (Quarterly meeting).
- Consulted for a consumer company, designing FRID employee tracking system (Confidential material).
- Consulted for a consumer company, designing swimming pool controller.
- National Instruments LabVIEW software users group, NI Academic, (Quarterly).
- South Florida Embedded Systems Group Meetings, SFEDG, (Monthly).
- Keynote speech, "Remote Labs and Engineering Distance Education", 6th Lamar Annual Student Research Conference, April 21-23, 2005, Lamar University, Texas.
- Consulting: Design and development for "Gyro-Balanced Boat Stabilizer" converting mechanical system assembly into computerized control. From patent to design. Prototype awaiting investment funds, 2005.
- Consulting: Design and development for "Interactive Multimedia Kiosk". From patent to design. Prototype awaiting investment funds, 2004/2005.

Academic Services

- **Member, College of Engineering, 2010 and beyond, 2010-Current**
- **Member, CSE Laboratory and Equipment Committee, 1996-Current**
- **Chair, CSE CE Undergraduate Program Committee, 2008-2010**
- **Member, CSE Undergraduate Program Committee, 2008-2010**
- **Member, CSE Teaching and Graduate Assistants Committee, 2008-2010**
- **Member, CSE ABET/SACS Committee, 2008-2010**
- **Member, FAU Diversity Committee**
- **Advisor, FAU Muslim Student Organization**
- **Member, UFF Executive Committee, FAU, 2005-Current**
-
- Member, CSE Executive Committee, 2008-2009
- Member, CSE Personnel Committee, 2007-2009
- Member, UFC Distance Education Committee, FAU, 2000-2006

- Member, FAU University Faculty Council Committee on Academic Freedom, FAU, 1998-2006
- Director, CSE CE Undergraduate Program Committee, FAU, 2005-2006
- Maintain a web site to provide a web support for few courses at department and college level. It served the following courses: Logic Design (CSE all sections), Microcomputer (CSE all sections), Senior Project, Engineering Design I and II (College wide), Embedded Systems, Data Acquisition, FAU, 1997-2003.
- Member, FAU Senate Planning Committee, FAU, 2004
- Member, ENG College ABET Eng. Design Committee, FAU, 2000-2004
- Member, ENG College ABET Committee, FAU, 1999-2004
- Member, CSE Department Executive Committee, FAU, 1999-2001
- Member, CSE Undergraduate Computer Engineering Committee, FAU, 1996-1999
- Member, CSE Undergraduate Program Committee, FAU, 1996-1999
- Chair, ENG College Computing Committee, USA, Sep 1995-May 1996
- Secretary, ENG College Faculty Meetings, USA, Sep 1995-May 1996
- Administrator, ENG College CAD Lab, USA, Sep 1995-May 1996
- QMS Scholarship Award Committee, USA, 1996
- Advisor, Computer Engineering Program, USA, Jan 1996-May 1996
- Member, Graduate Faculty, USA, Jan 1996-May 1996

Community Services

- Special engineering sessions for summer camps for local schools.
- Volunteer work at local k-12 schools, wherever my children are.
- PTA national and local member.
- Occasional computer related tours on FAU campus for local schools.
- Lectures at several community entities, FAU, Nova University, Hospitals, Churches, Synagogues, Islamic Centers, and others.
- A founding and executive member of the Islamic Center of Boca Raton.
- A founding member and chairman of the board of education, Garden of the Sahaba Academy, Boca Raton.
- Member of Boca Raton Clergy Association.
- Vice president of Delray Beach Interfaith Clergy Association.

Courses Taught

- **COT4935 (FAU, Current) Senior Seminars**
- **CDA4630 (FAU, Current) Intro to Embedded Systems Design**
- **CDA6316 (FAU, Current) Embedded Systems Design**
- **COT5930 (FAU, Current) Data Acquisition and Control**

- **CDA3201C (FAU, Current) Introduction to Logic Design (including lab)**
- **CDA3331C (FAU, Current) Introduction to Microcomputers (including lab)**
- **EGN4410 (FAU, Current) ENG College Engineering Design I**
- **EGN4411 (FAU, Current) ENG College Engineering Design II**
- **CDA4905 (FAU, Current) Computer Engineering Independent Study**
- **COT6900 (FAU, Current) Computer Science Independent Study**
- **COT6905 (FAU, Current) Computer Engineering Independent Study**
-
- CDA4914 (FAU, 1996-2001) Senior Projects Lab I
- CDA4915 (FAU, 1996-2001) Senior Projects Lab II
- EE263 (USA, 1996) Digital System Design I (Logic Design)
- EE264 (USA, 1996) Digital System Design II (Microprocessors)
- EE4/560 (USA, 1996) Digital Computer Architecture I
- EE402 (USA, 1996) Electrical and Computer Engineering Design I
- EE403 (USA, 1996) Electrical and Computer Engineering Design II
- EE494 (USA, 1996) Directed Independent Study

Courses Developed

- CDA4630 (FAU, 2003) Intro to Embedded Systems Design
- EGN4410 (FAU, 2002) ENG College Engineering Design I
- EGN4411 (FAU, 2002) ENG College Engineering Design II
- CDA6316 (FAU, 1999) Embedded Systems Design
- CDA4914 (FAU, 1998) Senior Projects Lab I
- CDA4915 (FAU, 1998) Senior Projects Lab II
- COT5930 (FAU, 1997) Data Acquisition and Control
- CDA3331C (FAU, 1997) Introduction to Microcomputers with Lab
- CDA3201C (FAU, 1997) Introduction to Logic Design with Lab
- EE4/533 (USA, 1996) Introduction to VLSI Circuits and Systems
- EE4/534 (USA, 1996) Advanced Topics in VLSI

Laboratories Developed

Full-Room Laboratories

- **Introduction to Microcomputers Lab**, FAU, 2007-08. Revamping the lab and migrating from the basic Motorola 68000 platforms to the FreeScale ColdFire platform. The ColdFire microcomputer chip is the latest in the embedded systems paradigm It offers the latest in embedded solutions, such as 12-b ADC, PWM timers, Real Time clock etc… and yet still has the legend 68000 microprocessor

core. The college supported this modernization of the lab by allocating funds to purchase 48 units.

- **Embedded Systems and Web-based control Lab**, FAU, 2004-2006. This new lab is primarily used for the Embedded System classes I teach but open for general student access for senior projects. The lab is also used for some sponsored research activities and grants from industry and government.
- **Data Acquisition and Control Lab**, FAU, August 1997-99. This new lab is primarily used for the Data Acquisition and Control Course. The lab is also used for some sponsored research activities and grants from industry and government.
- **Senior Project Lab**, FAU, 1996-99. The purpose of this new lab is to provide the senior students with state-of-the-art multipurpose laboratory with commercial hardware and software tools. Students can build and prototype real-world computer-based applications that better prepare them for the real challenging world. The lab includes various stations covering: Data Acquisition and Control, Data Communication, Single Board and Industrial Computers, Embedded Micro-controllers and Computers, A Fast Prototyping Digital Station (FPGA based), and Software Development, with each station featuring several platforms and/or manufacturers.

Patents

- Bassem Alhalabi and Magdy Bayoumi, "Hybrid Chip-set Architecture for Artificial Neural Network Systems", U.S. Patent #5,781,702, 1998. Sponsored by University of Louisiana.
    - Patent Summery (PDF): We developed a new complete system-level chip-set open architecture for feed-forward model with full connectivity and back-propagation learning. The system is based on two distinct chips, SynChip and NeuChip which may be cascaded to form networks matching any given application. The projected performance is 10,240 MCPS/MCUPS per SynChip and linearly grows thereafter. We devised a new embedded/distributed addressing technique which made the system self-contained. It also enhanced the system scalability as it allows multiple-chip enabling. Each SynChip has 32x32=1024 analog synapses, SynMod, and a local host-independent refreshing mechanism. Each NeuChip has 32 analog neuron, NeuMod, with special parallel learning hardware. The SynMod and NeuMod modules are designed with all-analog technology which enabled us to incorporate on-chip dynamic learning and maintain high degree of scalability, the two main characteristics which could not be found together in other systems. Furthermore, interfacing to the outside world is made universal as to accommodate virtually any digital or analog host systems via direct I/O ports. Each NeuChip supports 32-analog and 128-digital direct I/O lines which can be clustered into any word-length format to further enhance the system scalability. Also, the system may operate in continuous, step-discrete, or burst-discrete modes. Other features such as fault-tolerant capabilities, selective chip auditing, and a stand-by mode are provided.
- Bassem Alhalabi and Khalid Hamza, "Remote Laboratory Experimentation". U.S. patent Application N. 60/281,229, 2002. Sponsored by Florida Atlantic University. Patent application was abandoned in 2007.
    - Patent Summery (PDF)

Centers

- CADET: Center for the Advancement of Distance Education Technologies.
  - Director: Dr. Bassem Alhalabi,
  - Founders: Dr. Bassem Alhalabi and Dr. Khalid Hamza
  - Collaborators: Drs. Maria Petrie, Sam Hsu, and Robin Jordan
  - Executive Summary (PDF)
  - Activities: Research and Development in Remote Labs.

Publications

Total 63: Book Chapters (3), Journals (13), Conference (41), Others (6)

- All Publications are refereed except for the very few as indicated.
- Within each group, publications are listed in order with the most recent on the top.
- The header of each publication indicates:
  - My personal reference serial number,
  - A letter to indicate if it is a (B)ook, (J)ournal, (C)onference or, (O)ther,
  - A link to the PDF file,
  - A link to the actual conference/organization, and/or
  - An indication if it is not refereed.

1. Book Chapters (3)

- 55-B: IEC

  M. Alkhatib, M. Alam, B. Alhalabi, and I. Saeed, "Internet Protocol TV: The Use of Intelligent Compression for Future IPTV Networks" International Engineering Consortium, August 2006. ISBN: 978-1-931695-46-6
- 50-B

  A. Abu-El Humos, M. Cardei, B. Alhalabi, and S. Hsu, “Medium Access Control Protocols for Wireless Sensor Networks,” Wireless Sensor Networks and Applications, Y. Li, M. Thai and W. Wu (Eds.), Springer, Network Theory and Applications, 2005.
- 9-B

  B. A. Alhalabi, et al., "Built-In-Self-Test Architecture for Wafer Scale Architecture", Defect and Fault Tolerance. Vol III, Plenum Publishing, Edited by T. Mangir, August 1992.

2. Journal Articles (13)

- 49-J: ISTE

  Alhalabi, B., Hamza, M. K., and Marcovitz, D. M., "Innovative distance education technologies: remote labs in science & engineering education". ISTE Journal of Online Learning, June, 2001.
- 47-J: AACE

Mohammad Khalid Hamza, Qutaibah Malluhi, Bassem A. Alhalabi, "Distance Education Technologies (DET): Assessment & Evaluation!" AACE Journal, formerly Educational Technology Review, Vol. 12, Issue. 1, 2004, pp. 38-55

- 45-J:
  Khalid Hamza, Bassem Alhalabi, Sam Hsu, and Maria Petrie, David Marcovitz, "Remote Labs: The Next High Tech Step Beyond Simulation for Distance Education", Journal of Computers in the Schools, Vol.19, No2/4, 2002, pp.171-190, the Haworth Press, 2002, Binghamton, NY.
- 44-J:
  Khalid Hamza, Bassem Alhalabi, Sam Hsu, and Maria Petrie, David Marcovitz, "Remote Labs: The Next High Tech Step Beyond Simulation for Distance Education", Journal of Distance Education: Issues and Concerns, ed: Cleborne D. Maddux, Jacque Ewing-Taylor, and D. LaMont Johnson, pp.171-190, the Haworth Press Inc, 2002, Binghamton, NY.
- 41-J: PDF,
  Osama A. Mohammed, David A. Lowther, Meng H. Lean, and Bassem A. Alhalabi, "On the Creation of a Generalized Design Optimization for Electromagnetic Devices", It will appear in the IEEE Transactions on Magnetics, September 2001 issue.
- 23-J: Inroads, (highly selected editorial choice)
  M. Khalid Hamza, Bassem Alhalabi, and David Marcovits, "Creative Pedagogy for Computer Learning: Eight Effective Tactics", ACM SIGCSE Bulletin -- Inroads, Volume 32, Number 4, pp 70-73, December 2000.
- 26-J: PDF, THE Journal,
  S. Hsu, Oge Marques, M.K. Hamza & B. Alhalabi, "How to Design a virtual Classroom: 10 Easy Steps to Follow", The Technological Horizons in Education (THE) Journal, vol 27, no 2, pp. 96-109, Sep. 1999.
- 27-J: OnLine,
  M. K. Hamza & B. A. Alhalabi, "Technology and Education: Between Chaos and Order, First Monday Journal, Vol. 4 No. 3 - March 1st., 1999.
- 25-J: PDF, ISTE, (highly selected editorial choice)
  M. K. Hamza & B. Alhalabi, "Touching Students Minds in Cyberspace", Journal of Learning and Leading with Technology, International Society for Technology in Education ISTE, March 1999.
- 17-J: PDF, Kluwer,
  B. A. Alhalabi, M. A. Bayoumi, and B. Maaz "Mixed-Mode Programmable and Scalable Architecture for On-Chip Learning", International Journal of Analog Integrated Circuits and Signal Processing, Special issue: Learning on Silicon, Kluwer Academic Publisher, Edited by Gert Cauwenberghs et.al. pp 173-194, Boston, February, 1999.
- 21-J: PDF, (highly selected editorial choice)
  B. A. Alhalabi, M. K. Hamza, & S. Anandapuram, "Real Laboratories: an innovative rejoinder to the complexities of distance learning", the Open Praxis

Journal of International Council for Open and Distance Education, U.K., Volume 2, 1998.

- 19-J:

  R. A. Ayoubi, M. A. Bayoumi, and B. A. Alhalabi, "An Efficient Mapping Algorithm of Multi-Stage Perceptron on Mesh-Connected Architecture", Journal of Parallel Algorithms and Architectures, 1997.

- 6-J: PDF, Kluwer,

  M. A. Bayoumi, P. Rao, and B. A. Alhalabi, "VLSI Parallel Architecture for Kalman Filter: An Algorithmic Specific Approach", Journal of VLSI Signal Processing, 4, pp 147-163, Kluwer Academic Publisher, Boston, March 1992.

3. Conference Papers (41)

- 60-C:

  Duhaney, J., Khoshgoftaar, T.M., Cardei, I., Alhalabi, B. and Sloan, J., "Applications of Data Fusion in Monitoring Inaccessible Ocean Machinery." Proceedings of the 16th ISSAT International Conference on Reliability and Quality in Design, Washington, D.C., August 5-7, 2010, pp. 318-323.

- 59-C:

  Sloan, J., Khoshgoftaar, T.M., Alhalabi, B. "A Strategy for Data-Driven Testing of an Ocean Turbine Drivetrain." Proceedings of the 17th ISSAT International Conference on Reliability and Quality in Design, Vancouver, BC, Canada, August 4-6, 2011. In Press.

- 58-C:

  Ionut Cardei, Ankur Agarwal, Bassem Alhalabi, Timur Tavtilov, Taghi Khoshgoftaar, Pierre-Philippe Beaujean, “Software and Communications Architecture for Prognosis and Health Monitoring of Ocean-based Power Generator”, Conference on Systems Engineering, 2011

- 57-C:

  Chad Calvert, Georgiana Hamza-Lup, Ankur Agarwal, Bassem Alhalabi “An Integrated Component Selection for System Level Design”, IEEE Conference on Systems Engineering, 2011

- 56-C: PDF, ASEE-Z1-08

  B. Alhalabi, M.K. Hamza, and Ali Abu-El Humos, "Distance Education: Remote Labs Environment", Proceedings of ASEE Zone 1 Conference (ASEE Z1), United States Military Academy, West Point, NY, March 28-29, 2008.

- 54-C: PDF, WMSCI-06

  M. Alkhatib, M. Alam, B. Alhalabi, Y.Tung, and S. Alsharief, "Future Cellular Systems: with Lightning Prediction Capability and Adaptive Coding for Reliable Communications", Proceedings of World Multi-Conference on Systemics, Cybernetics, and Informatics (WMSCI 2006), Orlando, FL, July 2006.

- 53-C: PDF, WMSCI-06

  M. Alkhatib, M. Alam, and B. Alhalabi "Various Scenarios for Maximizing the Life Time of Wireless Sensor Networks", Proceedings of World Multi-

Conference on Systemics, Cybernetics, and Informatics (WMSCI 2006), Orlando, FL, July 2006.

- 52-C: PDF, IEEE-CSI2E05
  A. Abu-El Humos and B. Alhalabi, “FASMAC: A Low Latency and Energy Efficient MAC Protocol for Wireless Sensor Networks”, International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CIS2E 05), Sponsored by IEEE and University of Bridgeport, December 10-20, 2005.
- 51-C: PDF, IEEE-IECON05
  Ali Abu-El Humos, Bassem Alhalabi, M. K. Hamza, Eric Shufro, Wael Awada, “Remote Labs Environments (RLE): A Constructivist Online Experimentation in Science, Engineering, and Information Technology”, the 31st Annual Conference of the IEEE Industrial Electronics Society Sheraton Capital Center, Raleigh, North Carolina, USA November 6 – 10, 2005.
- 49-C: PDF, ICCSA2005
  M. K. Hamza, Bassem Alhalabi, Robin Jordan, Niveen Yaseen, Shyam Shukla, Ali Abu-El Humos, “Remote Lab Environments (RLE): Real Experiments at a Distance in Science and Engineering”, 3rd International Conference on Computer Science and its Applications (ICCSA-2005) , June 28-30, 2005, San Diego, California, USA.
- 48-C: PDF, SCI2005
  Bassem Alhalabi, Robin Jordan, Ali Abu-El Humos, Khalid Hamza, "Measuring Static and Kinetic Friction on an Inclined Plane via Remote Labs Modality", The World Multi-Conference on Systemics, Cybernetics, and Informatics SCI 2005. Orlando, FL.

Sponsored Research and Fund Proposals

0. Submitted and Pending (2) ($283K)

- First Light Wave, Inc., FL. ($185,000 Grant) (submitted and pending 2010)
  - **PI: Bassem Alhalabi**
  - CoPI: Ankur Agarwal
  - Title: obNeo Software Development
  - Purpose: build a medical training software
- Louis Soto, FL. ($97,786 Grant) (submitted and pending 2010)
  - **PI: Bassem Alhalabi**
  - Title: Chemotherapy Waste System
  - Purpose: build a prototype for a patented invention.

1. Funded and Active (2) ($196K)

- FAU, Ocean Engineering, ($145,919 Grant) (Granted Jan 2010, Dec 2011)
  - **PI: Bassem Alhalabi**
  - CoPI: Ankur Agarwal

    - Title: MCM and Prognostics Monitoring
- CGC, ($50,000 Grant) (Granted Aug 2010, Jul 2011)
    - PI: Ankur Agarwal
    - **CoPI: Bassem Alhalabi**
    - Title: Android Application Development

2. Funded and Concluded (9) ($338K)

- FAU, College of Engineering ($6,000 Grant) (funded May 2008)
    - **PI: Bassem Alhalabi**
    - Title: Computer Engineering lab Enhancement
    - Purpose: Money spent to enhance the CSE undergraduate labs. We purchased 48 new FreeScale ColdFire platforms which will be used for both CDA 3331 Intro to Microcomputers Lab and CDA 4630 Intro to Embedded System.
- FAU, College of Engineering ($20,000 Grant) (May 2007)
    - **PI: Bassem Alhalabi**
    - CoPi: Borko Furht, Ravi Shankar, Abhi Pandya, and Imad Mahgoub
    - Title: Computer Engineering lab Enhancement
    - Purpose: Money spent to enhance and/or create new hand-on state-of-the-art environment for Computer Engineering students. Equipment includes web cams, ARM9 development kits, various microcontrollers, single-chip embedded web servers, single-chip embedded Bluetooth and others
- FAU, Presidential Initiative Research Award ($22,500 Grant) (Awarded and Concluded, July 2000-2002)
    - **PI: Khalid Hamza**
    - CoPI: Bassem Alhalabi
    - Title: Remote Labs over the Internet
    - Purpose: To establish a research and development environment for engineering remote laboratories. This efforts will help establish web-based engineering courses.
- International Travel Grant $1500 to attend IEEE conference in Egypt, FAU DSR, 2001.
- NSF, CISE ($54,660 Grant) (Awarded and Concluded, June 1, 1999 – 2001)
    - **PI: Imad Mahgoub**
    - CoPIs: Bassem Alhalabi, Mohammad Ilyas, and Sam Hsu
    - Title: A Mobile Computing Laboratory
    - Purpose: To establish a research-oriented lab for conducting mobile computing related research. Projects include the implementation and evaluation data transfer and files systems for mobile computing and testing of wireless LAN.
- SFWMD ($85,000 Grant) (Awarded and Concluded, 1997-2000)
    - [South Florida Water Management District]
    - **PI: Maria Petrie**
    - CoPIs: Bassem Alhalabi, Marty Solomon
    - Title: Lake Okeechobee Ecosystem Study (LOES) Graphical User Interface

    - Purpose: To specify, develop, and implement GUI that facilitates direct access to LOES data by the district scientists and staff. The current user interface is text based and requires a high degree user sophistication. The proposed user interface will be graphical in nature, more intuitive, enabling the use of a mouse and video monitor to access data via a point-and-click paradigm.
- Adcon Telemetry ($4,350 Internship) (Awarded and Concluded, 1997-8
    - [Adcon is a manufacturer of wireless telemetry equipment in Florida]
    - **PI: Bassem Alhalabi**
    - Title: Graphical Software Interface and Control for Remote Telemetry Systems
    - Purpose: (confidential research agreement)
- An Oil Production Company ($65,300 Grant) (Awarded and Terminated, 1997
    - **PI: Bassem Alhalabi**
    - (confidential research agreement)
- QMS Inc. ($77,500 Grant) (Awarded and Concluded, May - Aug 1996
    - [QMS is a large laser printers manufacturer in Alabama]
    - **PI: Bassem Alhalabi**
    - Title: Advance Senior-Level VLSI Laboratory
    - Purpose: To build an advanced laboratory for senior projects and graduate research in the area of computer engineering. It also includes development of new instructional courses. The proposal was welcomed by the locally headquartered company because it enhances their partnership with the University as well as it produces better quality graduates for future employment.

3. Submitted but not Funded (18) ($9,560K)

- Safe Media Inc., ($23,874 Grant) (submitted and never responded to, 2007-2008)
    - **PI: Bassem Alhalabi**
    - CoPi: Borko Furht
    - Title: Pilot Installation of Clouseau, a P2P blocking system.
    - Purpose: Testing a new product.
- City of Boca Raton, FL. ($95,248 Grant) (submitted and never responded to, 2008)
    - **PI: Bassem Alhalabi**
    - CoPi: Vance H Peterson
    - Title: Sugar Sand Park: Race the lights
    - Purpose: revamping an exiting system and adding advanced technologies
- FAU, Ocean Engineering, ($55,596 Grant) (submitted and never responded to, May 2007)
    - **PI: Bassem Alhalabi**
    - Title: Submarine Data Logger
- Microsoft Inc., ($99,220 Grant) (Submitted and declined, Oct 2007)
    - **PI: Bassem Alhalabi**
    - CoPi: Inga Berman, and Oge Marques
    - Title: “HotZone” MOBILE TECHNOLOGY IN HEALTH CARE
    - Purpose: Developing mobile-based medical systems for poor countries

Ph.D. Students

Total (12); Advisor (4); Completed (3)

- **Ricardo Castellanos**
  - FAU, CE, 2010-2013, Advisor
  - Dissertation: "Embedded Systems"
- **Ahmad AbuShanab**
  - FAU, CE, 2010-2013, Committee Member
  - Dissertation: "Data Mining"
- **Victor Herrera**
  - FAU, CE, 2009-2012, Committee Member
  - Dissertation: "Data Mining"
- **Ali Al-Kazimi**
  - FAU, CE, 2009-2012, Committee Member
  - Dissertation: "Data Mining"
- **Randall Wald**
  - FAU, CE, 2009-2012, Committee Member
  - Dissertation: "Data Mining"
- **Wilker Altidor**
  - FAU, CS, 2009-2012, Committee Member
  - Dissertation: "Data Mining of Software Measurements"
- **Janell Duhaney**
  - FAU, CS, 2009-2012, Committee Member
  - Dissertation: "Data Mining and Integration"
- **Wael Awada**
  - FAU, CE, 2008-2013, Co-Advisor.
  - Dissertation: " "
- **Eric Shufro**
  - FAU, CE, 2005-2013, Main Advisor.
  - Dissertation: "Brain-Computer Interface Embedded Solution"
- **Ali Abul-Humos**
  - FAU, CE, 2002-2004, Main Advisor.
  - Dissertation: "Wireless Sensors Networks"
- **Zhiwei Xu**
  - FAU, CS, 1998-2001, Committee Member.
  - Dissertation: "Fuzzy Logic Techniques for Software Reliability Engineering"
- **Mohamed Khalid Nezami**
  - FAU, EE, 1996-2000, Committee Member.
  - Dissertation: "Synchronization in Digital Wireless Radio Receivers"

Master's Students

Total (40); Advisor (14); Completed (35)

- **Ravi Teja**

    - FAU, CE, 2010-2012, Co-Chair.
- **Mark Conatser**
    - FAU, CE, 2010-2012, Committee Member.
- **Abishek Duraiswamy**
    - FAU, CE, 2010-2012, Main Advisor.
- **Joseph Gundel**
    - FAU, CE, 2010-2012, Main Advisor.
- **Reza Waazim**
    - FAU, CE, 2009-2011,Committee member.
- **Steve Foley**
    - FAU, CE, 2009-2011, Main Advisor.
- **Ernesto Cividanes**
    - FAU, CE, 2008-2010, Committee.
- **Sebastian Possos**
    - FAU, CE, 2008-2010, Committee.
- **Sherif Fathalla**
    - FAU, CE, 2008-2010, Main Advisor.
- **Joshua Nelson**
    - FAU, CE, 2008-2010, Main Advisor.
- **Mark Rajan**
    - FAU, CE, 2008-2010, Main Advisor.
- **Scot Barnard**
    - FAU, CE, 2008-2009, Main Advisor.
- **Ricardo Castellanos**
    - FAU, CE, 2008-2010, Committee Member.
- **Chetan Tangadpelli**
    - FAU, CE, 2004-2006, Committee Member.
- **Vishal Shah**
    - FAU, CE, 2004-2005, Main Advisor, transferred
- **Wael Awadeh**
    - FAU, CE, 2004-2006, Committee Member.
- **Eric Shufro**
    - FAU, CE, 2003-2005, Main Advisor.
- **Tam Phan**
    - FAU, CS, 2001-2002, Committee Member.
- **Emanuel Sardina**
    - FAU, CS, 2001-2002, Committee Member.
- **Jayanth Rajeevalochanam**
    - FAU, CS, 2001-2002, Committee Member.
- **Laurent Nguyen**
    - FAU, CS, 2001-2002, Committee Member.
- **Angela Herzberg**
    - FAU, CS, 2000-2002, Committee Member.
- **Mohammed Abushadi**
    - FAU, CS, 2000-2002, Committee Member.
- **Barbara Perez**

    - FAU, CS, 2001-2003, Main Advisor.
    - Thesis: "Remote Labs"
- **Ali Abul-Humos**
    - FAU, CE, 2000-2002, Main Advisor.
    - Thesis: "Remote Labs, Motion and Friction Experiment"
- **Erik Geleyn**
    - FAU, CS, 2000-2002, Committee Member.
- **Yuhong Dong**
    - FAU, CS, 2000-2002, Committee Member.
- **Hao Zhu**
    - FAU, CS, 1999-2001, Committee Member.
- **Reena Cherukuri**
    - FAU, CS, 2000-2001, Committee Member.
- **Sai Babu Dara**
    - FAU, CS, 1997-2001, Committee Member.
- **Chee Kian Lim**
    - FAU, CS, 1999-2001, Committee Member.
    - Thesis: "Developing Accurate Software Quality Models Using a Faster, Easier, and Cheaper Method"
- **Flecher D. Ross**
    - FAU, CS, 2000-2001, Committee Member.
    - Thesis: "An Empirical Study of Analogy Based Software Quality Classification Models"
- **Fabio Costa**
    - FAU, CE, 1999-2001, Committee Member.
- **Hamid Akbarian**
    - FAU, CE, 1999-2001, Committee Member.
    - Thesis: "Design and Implementation of IP Telephony Using H.323 Standard Series"
- **Samer Aoudi**
    - FAU, CE, 1999-2001, Main Advisor.
    - Thesis: "Remote Labs: Java Interface for Netscape Browser"
- **Lakshmi Thampi**
    - FAU, CS, 1998-2000, Committee Member.
    - Thesis: "Analysis of Graphical User Interfaces Designed for an Ecological Data System"
- **Krishna Adusumilli**
    - FAU, CE, 1997-1999, Committee Member.
    - Thesis: "SOFTBOARD- A Web Based Application Sharing System for Distance Learning"
- **Sudeep Anandapuram**
    - FAU, CE, 1997-1999, Main Advisor.
    - Thesis: "Remote Laboratories for Distance Education"
- **Ilya Portnoy**
    - FAU, CS, 1997-1999, Committee Member.

    - Thesis: "Analysis and Implementation Issues of the Icon Generator, Manager, and Repository for an Icon-Based Software Engineering Environment"
- **Qinxi Huang**
    - FAU, CS, 1996-1998, Committee Member.
    - Thesis: "A Framework for an Icon-Based Software Engineering Environment"

Student Senior Projects

100's of projects have been administered and advised , 1996-current

- In Spring 2001, the College of Engineering Merged the Senior Design Courses from the three departments under one Sequence of Engineering Design Courses, ED1 and ED2. Along with Dr. Dani Raviv (EE) and Ming Huang (ME), I created the infrastructure for these college-level design courses. Many projects have evolved from this college-level effort as strongly encouraged and supported by the Dean of Engineering, Dr. Karl Stevens.
- When I joined the Computer Science and Engineering Department in 1996, I created the Senior Project Laboratory to provide hands-on experience to the Computer Engineering students in the Senior Project Courses. The lab features state-of-the-art tools and equipment representing many computer platforms and subsystems from many leading companies. I have always served as the coordinator for Senior Project Design courses and as an advisor for most of the Senior Projects.