

## Appendix B – Letters of Support

November 23, 2007

**Subject: Letter of Support for PhD in ECE at Oakland University**

**To: Dr. Manohar Das, Chair, Department of Electrical and Computer Engineering**

We support and recommend your new program for PhD in ECE at Oakland University in place of the Systems Engineering program. Why do we strongly support this new PhD program in ECE? The answer is due to the futuristic needs of the Air Force, such as satellite communication. Not long ago, I evaluated the University of Tennessee's Electrical and Computer Engineering program as an invited member of its' advisory committee with restructuring ideas similar to that of Oakland University's new ECE program with the focus on the development of engineering skills needed today by industry and government. As I mentioned, satellite communication and its associative training skills needed by future engineers is a strong common technology thread for both industry and government. In satellite communication and collaborating micro satellite clusters, one of the key tasks of a system-on-a-chip receiver is mixed-signal adaptive equalization and optical sensor fusion, or the ability to mitigate optical signals originating from multi-path propagation and sensors. Mixed-signal ASIC includes a class of "smart" circuits that must perform the optical processing and equalization of sensor data for communication systems. The goal is to achieve real-time sensor signal fusion; and to achieve high speed and low power mixed-signal application specific integrated circuit (ASIC) designs by using adaptive and genetic intelligent algorithm methodology. Likewise, the design and characterization of an adaptive antenna structure, using a 3D Microwave Monolithic Integrated Circuit (3D MMIC) design skills is needed with the emphasis on modeling and integration. Specifically, we are interested in not only optimizing sensor data fusion, but also sensor choice, weight, cost, manufacturing tolerance, etc.

The unifying program ECE theme that can be derived from the list below is that information always has to come and go in and out of digital cyberspace and that path is through RF and mixed-signal chipsets.

- *Wireless Transmitters and Receivers*
- *GPS Receivers*
- *ID Friend/Foe Transponders*
- *ISDN, ATM and other Network Interface Transceivers*
- *Wired & Wireless Audio, Video, and Data Transmission*

The list is by no means exhaustive, but highly representative of the Air Force applications that we need and Oakland University is addressing with the ECE PhD program. The bottom line is that the Information Directorate can't even think about doing Global Awareness, Dynamic Planning and Execution, Global Information Exchange, or much of anything else without future ECE PhD students trained in these skill methodologies as shown above.

*Dr Robert L Ewing  
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Air Force Research Laboratory (AFRL)  
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robert.ewing@wpafb.af.mil*



John S. Felice

11/2/2007

Pieter A. Frick  
Professor and Dean  
Oakland University

Dear Professor Frick:

It has come to my attention that Oakland University is currently in the process of proposing a new Ph.D. program in Electrical Engineering and Electrical Computer Engineering. I am writing in support of this proposal.

I am responsible for technology development in the Manufacturing Technology & Global Enterprise organization for Chrysler LLC. I have had the opportunity to follow the dynamics of the increasing demands on developing advanced technologies for applications that can be used in our Assembly and Stamping Plants. These technologies are developed between Academia and Industry working together. It is clear that we need to offer programs at a higher level to feed the requirements for staffing these emerging technologies.

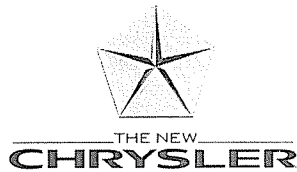
Oakland University is geographically positioned to be able to respond to the needs of the greater Detroit area. However, it cannot possibly support the current industry needs without the advanced degree programs nor can it get the proper funding and research without these programs. Currently, your Mechanical Engineering Doctoral program is doing well but the need exists to provide trained personnel in other areas as well.

I strongly advocate the initiation of an Electrical Engineering and Electrical Computer Engineering Doctoral programs. I encourage this effort as Vice President of the Manufacturing Technology & Global Enterprise organization for Chrysler LLC and can assure you that local as well as statewide industries can only benefit from Oakland University adding these programs to its curriculum.

Sincerely,

A handwritten signature in black ink that reads "John S. Felice". The signature is written in a cursive style with a large, prominent initial "J".

John S. Felice



November 28, 2007

Dr. Manohar Das, Chair  
Oakland University,  
Department of Electrical and Computer Engineering,  
School Of Engineering and Computer Science,  
Rochester, MI 48309-4416

Dear Dr. Das:

It has come to my attention that Oakland University is currently in process of proposing a new PhD program in Electrical and Computer Engineering. I am writing to you in support of this effort.

I work as a Senior Specialist in the Advanced Transmission System Engineering Department with Chrysler LLC. For the past few years, I have had the opportunity to hire many engineers at Chrysler LLC and have always felt the absence of an Electrical Engineering focus from local universities.

The booming economy has created a lot of engineering jobs especially in the Electrical and Computer Engineering field. With an advanced degree program in Electrical Engineering, Oakland University will be well positioned to supply the much needed technical skill in this critical field. This program will definitely enhance your ability to attract collaborative research partnerships with not only the automotive industries in Detroit, but also other industries in general.

I strongly support the initiation of PhD program in Electrical and Computer Engineering at Oakland University and assure you that both the industry and Oakland University can benefit from this program.

Sincerely,

Dr. Hussein Dourra  
Senior Specialist  
Advanced Transmission System Engineering  
Chrysler, LLC.



November 26, 2007

Dr. Manohar Das, Chair  
Oakland University,  
Department of Electrical and Computer Engineering,  
School Of Engineering and Computer Science,  
Rochester, MI 48309-4416

Dear Dr. Das:

It has come to my attention that Oakland University is currently in the process of proposing a new PhD program in Electrical and Computer Engineering.

While your advanced degree programs in Systems and Mechanical Engineering have graduated top-notch students, I have always felt the absence of an Electrical and Computer Engineering focus.

The quality of the undergraduate program is closely tied to the intensity and quality of research activities in that field and I believe that PhD program in Electrical and Computer Engineering will surely have a positive impact on the overall quality of the department.

I strongly advocate the instatement of a PhD program in Electrical and Computer Engineering at Oakland University and sincerely hope that it will be pursued in earnest.

Sincerely,

Berthold Martin  
Senior Manager/Specialist  
Advanced Transmission Engineering  
Chrysler, LLC.

20.Nov.2007


Dear Prof. Manohar Das

I read the proposal for a Ph.D. program in ECE. I am very excited about this development. The current systems engineering option for Ph.D. is intentionally designed to be broad-based. As a consequence it appears to be constricting in its scope of allowed coursework. I have personally experienced this and so have a few others that I communicate with. The introduction of an ECE Ph.D. program offers a natural progression for students graduating from the M.S. program. Additionally, this has the immense potential to spawn research into more fields which will most certainly have a positive trickle down effect into the undergraduate and graduate curriculum.

This perhaps affords the opportunity to offer an integrated MS/PhD compressed timing program. This will seem very attractive for future students deciding on a school for advanced studies.

I fully support this initiative. Please let me know if I can contribute in any way possible.

Dr. Anand Jayaraman  
Engineering Specialist  
Hybrid Brakes  
Continental Automotive Systems  
248.330.6153



Continental  
Automotive Systems Division  
One Continental Dr  
Auburn Hills, MI 48326

Phone 248-393-5300  
Fax 248-393-5301

# DELPHI

November 19, 2007

Professor Manohar Das, Acting Chair  
Electrical and Computer Engineering Department  
Oakland University  
Rochester, MI 48309-4401

Dear Professor Das:

I have often wondered in recent years about the lack of a Ph.D. program in Electrical and Computer Engineering at Oakland University. So it is with great pleasure that I learned recently about your proposal for such a program, and it is with great enthusiasm that I am writing to you in support of such an effort.

As you may already know, Delphi is in the process of consolidating all its engineering activities in South East Michigan in one Technical Center in Auburn Hills. The center will house over 1,000 engineers with a substantial portion of them having Electrical and Computer Engineering background. It will be located on University Drive near the I75 exit, less than one mile from Oakland University. My research activity at Shelby Township, Michigan, is part of this consolidation. We will be moving to the new center by the end of this year.

As your next door neighbors, I anticipate that the level of cooperation between your Faculty and our researchers will increase significantly. Both your institution and Delphi will benefit substantially if the cooperative effort includes Ph.D. graduates in Electrical and Computer Engineering. In recent years a few of our researchers have participated in review committees of Ph.D. graduates from Michigan State University, Wayne State University, and as far as Linkoping University in Sweden. It only makes sense to extend our activities to include our neighbors.

In addition to the benefits I described above, I agree with all benefits that are outlined in the proposal draft document that I received a few days ago. Accordingly, I strongly support your endeavor, and I look forward to see it implemented soon.

Sincerely,



Michel Sultan, Ph.D.  
Principal Technical Fellow  
Advanced Controls and Security  
Delphi Electronics & Safety

michel.f.sultan@delphi.com  
1-586-323-3977

# DELPHI

November 29, 2007

Manohar Das, Ph.D.  
Professor and Acting Chair  
Electrical and Computer Engineering Department  
Oakland University  
2200 N. Squirrel Road  
Rochester, MI 48309-4401

Dear Dr. Das:

It is with great enthusiasm that I write in support of your proposal for a Ph.D. program in Electrical and Computer Engineering at Oakland University.

My colleagues and I are well aware and impressed with the capabilities that Oakland University provides to more than 17,000 students from around the world. Your institution's current doctorate degree in Systems Engineering has been more than adequate, but as the importance and specialization of Electrical and Computer Engineering evolves, I believe a Ph.D. program is warranted.

This Ph.D. program would enhance your already stellar reputation inside and outside this region. You would provide companies like Delphi the opportunity for on-going partnerships and raise the profile of the entire department.

I hope your proposal is met with strong support at Oakland.

Sincerely,



**David E. Helton**  
Chief Engineer , Engine Management Systems  
Site Director - Technical Center Brighton



*DENSO*

DENSO INTERNATIONAL AMERICA, INC.  
24777 Denso Drive, P.O. Box 5047  
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Tel: (248) 350-7500  
www.denso-na.com

Oakland University  
Rochester Hills, MI

November 12, 2007

I support the establishment of an innovative Doctoral program under the title of Electrical & Computer Engineering at Oakland University, Rochester Hills, MI. I believe such a program would be of value to the automotive industry in Southeast Michigan.



Don Lee  
Sr. Manager, BCS4  
DENSO International America, Inc.  
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Southfield, MI 48033  
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don\_lee@denso-diam.com



FANUC Robotics North America, Inc.  
3900 W. Hamlin Road  
Rochester Hills, Michigan 48309-3253

Telephone: (248) 377-7000  
Facsimile: (248) 377-7362

November 8, 2007

Dr. Manohar Das  
Professor and Acting Chair  
Department of Electrical and Computer Engineering  
Science and Engineering Building  
Oakland University  
Rochester, MI 48309

Dear Professor Das,

I am excited to hear that the Department of Electrical and Computer Engineering is in the process of adding a PhD in Electrical and Computer Engineering to its curriculum.

It is well known among those of us in the manufacturing automation business, and the automotive industry in particular, that there is a growing need for high quality Engineering talent to maintain and even enhance our competitiveness in the global marketplace. Especially here at FANUC Robotics we understand the importance of employing individuals who have reached the PhD level to continue to produce innovative products.

Further, we see a growing proliferation of advanced electronics and computer-based control in our and our customers' products, making expertise in these fields especially important .

In my experience with your Department at Oakland University both as a student and part-time instructor, I have been and continue to be impressed with the high quality of instruction and research provided by your faculty.

Therefore, I feel it is all the more important that your Department should extend your excellent performance into this discipline which is so important to our industry, and accordingly I strongly support your proposal to do so.

Best Regards,

A handwritten signature in black ink, appearing to read "Randy A. Graca".

Dr. Randy A. Graca  
Senior Product Development Engineer



FANUC Robotics North America, Inc.  
3900 W. Hamlin Road  
Rochester Hills, Michigan 48309-3253

Telephone: (248) 377-7000  
Facsimile: (248) 377-7362

November 11, 2007

Dr. Manohar Das  
Professor and Acting chair  
Department of Electrical and Computer Engineering  
Science and Engineering building  
Oakland University  
Rochester, Mi. 48309

Dear Professor Das,

I have recently learned that a proposal to add a Phd degree program in Electrical and Computer Engineering is being considered by the department.

As a Product Development Engineer at Fanuc Robotics, I have observed a burgeoning need for highly educated technical individuals. Our market is extremely competitive, and customers demand solutions to problems that overlap multiple educational disciplines, and also require specialized knowledge (like "mechatronics"). Moreover, problems are becoming more complex. My colleagues and I share the same opinion: the need for Phd Level problem-solving ability is increasing and will only continue to increase.

Being a graduate of Oakland University's Systems Engineering program, I can attest to the tremendous talent of the faculty, the quality of the courses and significant research being performed. However, the need to apply deeper and more specialized knowledge to solve real world problems is increasing. Also, the knowledge base for Electrical and Systems Engineering is growing at a staggering rate. It is very difficult to meet these needs with a single Phd program: Systems Engineering. Also, other major universities in Michigan and the rest of the world have an ECE Phd program. The volume of students that graduate from these ECE programs is large, both in terms of actual numbers, and in terms of percentage of total PhD graduates. The ECE program is very important.

Addition of an ECE Phd program will enable Oakland University to develop programs that capitalize on specialty areas that can provide growth. Moreover, lack of an ECE Phd program, which could be perceived as a shortcoming (relative to other schools) - by students considering Oakland University enrollment, and by companies considering Oakland University graduates - is eliminated.

In short, I commend your proposal for an ECE Phd program, and I strongly support the initiative.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank J. Garza", written over a horizontal line.

Dr. Frank J. Garza

Staff Product Development Engineer



Ford Motor Company

Research and Innovation Center,  
2101 Village Road  
Dearborn, MI 48121

November 6, 2007

Professor Manohar Das, Acting Chair  
Electrical and Computer Science Engineering  
Oakland University  
102 Science and Engineering Building  
Oakland University, Rochester, MI 48309-4478

Dear Professor Das,

It was with great interest that I read the proposal you sent regarding the Ph.D. program in Electrical and Computer Engineering. I often thought this was a gap in the Oakland University engineering curriculum. I personally opted for the Ph.D. in Systems Engineering about 10 years ago even though I have B.S. and M.S. degrees in Electrical Engineering. My first choice would have been a Ph.D. in EE or ECE had such programs been offered. I can't help but think that some students may have chosen other schools due to that fact.

I believe the addition of the proposed program will help put Oakland University on par with some of the other major institutions in the area that already have such programs. Being well positioned along the technical corridor of I-75, a Ph.D. degree opportunity in electrical and computer science can only enhance Oakland University's academic and research reputation. Furthermore, it's been my experience that Oakland University has the talent within the faculty to support such a program and carry it out.

In-short I have always believed that Oakland University has accommodated the working professional. This gives the University a leg-up on many of the neighboring universities. This pro-professional attitude, combined with a fully rounded-out set of Ph.D. programs, will serve the University and surrounding industry well. I extend my full support and encouragement to this effort.

Sincerely,

A handwritten signature in black ink that reads "Scott G. Amman".

Scott Amman P.E., Ph.D.  
Technical Expert  
Ford Motor Company  
(313) 845-5427  
samman@ford.com



Professor Manohar Das, Acting Chair  
Department of Electrical and Computer Engineering  
Oakland University  
Dodge Hall of Engineering  
Rochester, MI

November 19, 2007

Dear Professor Das,

It has come to my attention that Oakland University is currently in the process of proposing a new PhD program in Electrical and Computer Engineering. I'm writing in support of this effort.

I'm an engineering group manager at General Motors and one of my Engineers (Mohannad Murad) is currently pursuing his PhD at your university in the field of Systems Engineering.

Electrical and Computer Engineering is critical for future technological innovation, particularly in the field of automotive engineering. As the competition in the automotive industry continues to increase, the companies with superior technical depth will be at a competitive advantage.

As the demand increase to educate and prepare students for technical careers, I am confident that your PhD program in Electrical and Computer Engineering (ECE) will be well received by the automotive industry as well as industrial and governmental research and development laboratories in both the U.S. and abroad.

I support your efforts and hope that your proposal is well received.

Sincerely,

A handwritten signature in black ink, appearing to read "David Carey", with a stylized, looping flourish at the end.

David Carey,  
Engineering Group Manager



39001 West Twelve Mile Road  
Farmington Hills, Michigan 48331

November 16, 2007

Professor Manohar Das, Acting Chair  
Department of Electrical and Computer Engineering  
School of Engineering and Computer Science  
Oakland University  
Dodge Hall of Engineering  
Rochester, Michigan 48309-4478

Dear Professor Das:

The inclusion of a PhD program in Electrical and Computer Engineering at Oakland University would benefit the local industries. We at Harman/Becker have a strong Electrical and computer engineering department which a large percentage are pursuing advanced degrees including a Ph.D. Their options to pursue a Ph.D. in Electrical and computer Engineering are limited in their selection of a place of higher education.

It is with sincere interest that Harman/Becker Engineering would encourage Oakland University to include a Ph.D. program in Electrical and computer Engineering and hope your proposal is well received.

Best Regards

A handwritten signature in black ink that reads 'Steven E. Montealegre'. The signature is written in a cursive style with a large, stylized 'M'.

Steven E. Montealegre

Director, Product Development Engineering

# HITACHI

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Automotive Products Research Laboratory  
R&D Division  
Hitachi America, Ltd.

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Farmington Hills, MI 48335  
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Fax 248-473-8420  
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December 6, 2007

Professor Manohar Das, Chair  
Electrical & Computer Engineering Department  
Oakland University  
Rochester, MI 48309-4401

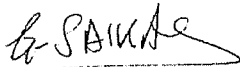
Dear Professor Das:

It is with great interest that I received your proposal for creating a new Ph.D. degree program in Electrical and Computer Engineering (ECE). By and large, the Ph.D. degree in ECE is well recognized locally and worldwide. The new degree will allow broadening the research scope of the ECE department at Oakland University.

This mainstream Ph.D. degree will allow the ECE department to attract high caliber students from the industry and from academia. The area of ECE is quite wide with many specialization fields such as embedded systems, controls, electronics, wireless technologies and many more. The proposed degree will be very well suited to cover these areas and will not only allow the incubation of new research not currently investigated at Oakland University but also enhance the superiority of the department's graduate course and graduate top notch experts.

I support this proposal and I hope that Oakland University will approve this program at the earliest.

Sincerely,



George Saikalis, Ph.D.  
Senior Director and Laboratory Manager  
Hitachi America, Ltd.

November 07, 2007

Professor Manohar Das,  
Chair,  
Department of Electrical and  
Computer Engineering  
Oakland University  
Rochester, Michigan  
48309

Professor Das,

It has come to my notice that Oakland University is proposing to start a PhD program in Electrical and Computer Engineering. I would like to offer my support to this effort.

The Oakland University campus is very well suited to attract students who wish to pursue advanced degree programs including research in the field of Electrical and Computer Engineering. In Michigan, there is growing requirement of PhD's in the area of Control Engineering, Signal Processing, Electromagnetics, Communication Systems, Microelectronics, VLSI design, Software Engineering, Computer Architecture, Knowledge Based Systems etc. Although the current PhD program in System Engineering provides a student with many research areas within Electrical and Computer Engineering, a PhD degree in Electrical and Computer Engineering is more recognizable in the industry.

I strongly support the proposal for starting a PhD program in Electrical and Computer Engineering at Oakland University. I wish the proposal continued success.

Sincerely,



Devendra Bajpai, Ph.D.  
Software Technical Specialist,





DEPARTMENT OF THE ARMY  
U S ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND  
6501 E ELEVEN MILE ROAD  
WARREN, MICHIGAN 48397-5000

20 November 2007

Manohar Das, Ph.D.  
Professor, Chair  
Oakland University  
Department of Electrical and Computer Engineering  
102 Science and Engineering Bldg.  
Rochester, MI 48309-4478

Subject: Recommendation for Proposed Ph.D. Program.

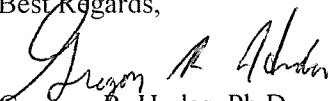
Dear Professor Das,

The following letter serves as my recommendation for the proposed Ph.D. program in Electrical and Computer Engineering (ECE) at Oakland University. After discussions with my colleagues, I fully recommend that this program be approved based on relevance for current and future U.S. Army RD&E objectives.

Due to the complexity of the ever-changing battlefield environment, DoD laboratories (particularly the Army) need to be innovative and robust in meeting the growing technological challenges. Some of these recognized challenges include electronics, control theory, sensor/sensor fusion, robotics, computational theory, etc. In order to do this, a strong research, development, and engineering knowledge base is needed within the workforce. Advanced educational programs such as the proposed Ph.D. will help us meet these challenges effectively.

As an active researcher and technical manager in the areas of robotic systems and computational intelligent methodologies, I fully understand the academic capabilities needed to be successful in these areas. I conducted my Ph.D. studies at Oakland University and recognized the technical excellence of the faculty and facilities. Also, I have collaborated with a few of the ECE Professors on U.S. Army funded research initiatives with successful results. These personal experiences allow for a favorable recommendation of the proposed ECE Ph.D. program at Oakland University.

Best Regards,

  
Gregory R. Hudas, Ph.D.,  
Program Manager, Academic Programs  
Joint Center for Unmanned Ground Vehicles (JC-UGV)  
U.S. Army RDECOM-TARDEC  
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Warren, MI, 48397-5000  
greg.hudas@us.army.mil