University of Michigan
College of Engineering

Dr. Anatole S. and Pamela D. Dekaban Fund

Annual Report
July 1, 2012 – June 30, 2013

Prepared by
Professor Radoslaw L. Michalowski
Dekaban Program Coordinator

December 2013

Warsaw University of Technology
The Main Building
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Executive Summary

This year marked the twentieth anniversary of the Dekaban Fund that was initiated with the gift of Dr. Anatole S. and Mrs. Pamela D. Dekaban in 1993. The purpose of the Dekaban Program is to encourage the exchange of technical knowledge between advanced academics in various fields of engineering at the Warsaw University of Technology (WUT) in Poland, and at the University of Michigan (U-M) College of Engineering (CoE) in Ann Arbor, Michigan.

The primary mission of the Dekaban Fund is the sponsorship of long-term visits of young faculty members from WUT to the University of Michigan, and 2012-13 year saw the 28\textsuperscript{th} Dekaban Fellow visiting Michigan. The College of Engineering also hosted senior visitors from WUT, as part of an ongoing collaboration. October 1, 2012 marked the day that newly elected leadership at the Warsaw University of Technology took office; the membership on the Dekaban Program Committee in Warsaw also changed.

The fund remains fiscally healthy and the program is ready to receive new exchange visitors. Updated information about the program is available at the Dekaban Fund website (http://dekaban.engin.umich.edu/).
2012-2013 Activities

New Administration at the Warsaw University of Technology

October 1, 2013, marked the change of the university administration at WUT. Professor Jan Szmidt was elected rector of the University, and Professor Rajmund Bacewicz became the vice-rector for Research. A meeting dedicated to the Dekaban Program was held on November 9, 2013; Rector Szmidt appointed Professor Piotr Wolanski as the chair of the Dekaban Committee at WUT, and Professor Rajmund Bacewicz joined the committee ex-officio. Two more members of the committee were to be appointed later, and it was suggested that the new committee will meet in spring 2014.
Dekaban Fellowships

The principal activity of the Dekaban Program is the exchange of junior faculty members between the Warsaw University of Technology and the College of Engineering at the University of Michigan. The majority of former Dekaban Fellows have been recruited from the rank of assistant professors at WUT. The coordinator of the program at Michigan makes every effort to match the interests of the potential fellows with those of the faculty at Michigan, and the visitors come with a well-prepared program of study and research. The 2012-13 Dekaban Fellow, Dr. Marta Sitek, was selected from the Faculty of Civil Engineering at WUT. Before arriving in Ann Arbor, she met with the Dekaban program coordinator, Professor R. Michalowski, in Warsaw in May 2012 during his routine yearly visit to the Warsaw University of Technology. Dr. Sitek became the 28th Dekaban Fellow since the inception of the Program in 1993.

Dr. Marta Sitek

Dr. Marta Sitek joined the College of Engineering as a Dekaban Fellow and visiting research scholar in November 2012 for a ten-month appointment with the Department of Civil and Environmental Engineering (CEE). During her Dekaban Fellowship, Dr. Sitek worked closely with CEE Professor and Dekaban Program Chair Radoslaw Michalowski. Dr. Sitek is an assistant professor at WUT in the Department of Civil Engineering. The emphasis of her work is on the mechanics of structures and the numerical methods in mechanics, and her research is focused on the Finite Element Method.

While at U-M, Dr. Sitek applied her knowledge of the Finite Element Method to geotechnical engineering, the area of civil engineering concerned with the engineering behavior of earth materials as it relates to stability. More specifically, she conducted limit analysis in soils and focused on the issues of critical loads, bearing capacity of footings, and the stability of slopes. In collaboration with Prof. Michalowski, she worked to develop a new method of solving these issues. This method ultimately could be incorporated into software programs to aid engineers in designing safer structures. She plans to continue both this research and her collaboration with Prof. Michalowski upon her return to Poland in late August, and expects to publish the results of her research in the near future.

During her fellowship, Dr. Sitek appreciated the opportunity to work and learn at one of the world’s top engineering universities. Access to the University’s vast network of
resources—whether online articles, software programs or technical support in the College’s computer laboratories—was particularly helpful to her work. She especially enjoyed working with Prof. Michalowski and other talented faculty and students, and participating in seminars.

**WUT – U-M Interactions**

As the elections of the new administration of the Warsaw University of Technology took place in spring of 2012, the program coordinator, Prof. Michalowski, met on August 7th with the newly elected vice-rector for Research, Prof. Rajmund Bacewicz, who will be overseeing the Dekaban Program activities in Warsaw. The meeting was facilitated by Prof. Wladyslaw Wlosinski, then a member of the Dekaban Program Committee in Warsaw. Plans were made regarding continuation of the program, as well for a meeting in Warsaw in the fall of 2013, after the new administration took office (that meeting took place on November 9). While in Warsaw, Prof. Michalowski met with Dr. Marta Sitek, who was selected earlier as the 28th Dekaban Fellow and was scheduled to begin her fellowship at the University of Michigan in October 2012.
In April 2013, Vice-Rector for Research Rajmund Bacewicz and Professor Piotr Wolanski paid a two-day visit to the College of Engineering in Ann Arbor.

The program for this visit was related to the development of a new center for materials research in Warsaw. On the first day of their visit, the guests from Warsaw met with Prof. John Allison of Materials Science & Engineering, who is an expert in alloying, and microstructure and properties in metallic materials; Prof. Jamie Phillips of Electrical Engineering and Computer Sciences, whose domain is optics and photonics, solid-state devices, and nanotechnology; and Prof. Joanna Mirecki-Millunchick from the Department of Materials Science & Engineering, who is an expert in materials and surface sciences of semiconductor thin film nucleation and epitaxy. Day one concluded with a tour of the Robert H. Lurie Nanofabrication Facility. The following day, Professors Bacewicz and Wolanski met with Prof. Ted Norris of Electrical Engineering and Computer Science, who is an expert on the application of femtosecond optical techniques to the physics of semiconductor nanostructures in developing new ultrafast optical and optoelectronic measurement techniques.
In May, Prof. Michalowski visited Warsaw University of Technology; during that visit he held meetings with Vice-Rector for Research Prof. R. Bacewicz and with the Dekaban Program Committee.

While in Warsaw, the Dekaban program coordinator interviewed three candidates for Dekaban Fellowships. One of those candidates, Dr. Aldona Kluczek will being her fellowship in Ann Arbor at the end of September, 2013, as the 29th Dekaban Fellow.

In June 2013, the Warsaw University of Technology organized the Second World Congress of Polish Engineers. The Congress was focused on the how engineers who live outside of Poland, but have some ties to Poland, can help in the development of the Polish economy. Prof. R. Michalowski was invited to hold discussions on the exchange of academic professionals with U.S. institutions. The conference was held at the Warsaw University of Technology and at the Polish Federation of Engineering Societies on June 26–28, 2013.
Other Activities

A new Dekaban Program Committee was formed in Warsaw, and the first meeting of the committee took place on February 5, 2013. The new committee includes four members (listed alphabetically):

- Professor Rajmund Bacewicz, vice-rector for Research
- Dr. Robert Mroczynski, assistant professor at the Faculty of Electronics and a former Dekaban Fellow
- Professor Anna Siemińska-Lewandowska, associate dean for Research of the Faculty of Civil Engineering and a former senior Dekaban Fellow
- Professor Piotr Wolanski, Chairman of the Committee and a former senior Dekaban Fellow

The first meeting of the Committee was devoted to the process of selecting the Dekaban Fellows, and plans for a meeting of WUT administration with the leadership of the U-M College of Engineering (which later was cancelled due to scheduling conflicts).
While visiting Michigan and developing their technical skills and knowledge, Dekaban Fellows also learn about American traditions. Each Dekaban Fellow has an opportunity to participate in at least one major national holiday. Dr. Marta Sitek celebrated Thanksgiving with other visitors and graduate students at the Michalowski home.

Dr. Marta Sitek with the traditional Thanksgiving dish – the turkey
Plans for 2013-2014

Plans were made for two Dekaban Fellows to visit the College of Engineering at U-M in academic year 2013-14. They are listed below.

Dr. Aldona Kluczek received her PhD from the Faculty of Production Engineering at the Warsaw University of Technology in 2013. She is currently assistant professor at WUT. In late September 2013, she joined the research group of Professor Larry Seiford in the Department of Industrial and Operations Engineering, and she will work with Prof. Seiford for twelve months.

Dr. hab. Jacek Dybala received his PhD in mechanical engineering from the Warsaw University of Technology in 2000. He is currently associate professor at the Faculty of Automotive Engineering. He joined Professor Jerry Lynch’s research group at the Department of Civil and Environmental Engineering in September 2013 for a term of three months.
Appendices

Appendix A
Dekaban Fund Advisory Council and Program Committee

Dekaban Fund Advisory Council:

Thaddeus C. Radzilowski, Ph.D.
Committee Chair
President, Piast Institute
11633 Joseph Campau
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Geneva Rivera
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313-733-4535
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Dekaban Program Committee at the Warsaw University of Technology:

Professor Piotr Wolański, Chair
Professor Rajmund Bacewicz, *ex-officio*, vice-rector for Research
Dr. Robert Mroczynski
Professor Anna Sieminska-Lewandowska

Dekaban Program Coordinator at the University of Michigan College of Engineering:

Professor Radoslaw L. Michalowski
Appendix B

Dekaban Fellow Profile

Name: Marta Sitek
Assistant professor, Faculty of Civil Engineering, WUT
2012-2013 Dekaban Fellow

Institution: University of Michigan College of Engineering
Department of Civil and Environmental Engineering
Home Department: Civil Engineering
Warsaw University of Technology

Title: Visiting Assistant Research Scientist

Address: 2364 G.G. Brown Building
Ann Arbor, MI 48109-2125

E-Mail: m.sitek@il.pw.edu.pl

Education: 2010 – PhD, Warsaw University of Technology
2006 – MS, Warsaw University of Technology

Research Interests: Mechanics of structures, numerical methods in engineering

Dekaban Fund Activity: Dekaban Fellow, November, 2012 - August, 2013; carried out research on developing a new numerical method for solving problems using the kinematic approach of limit analysis, targeted at the mechanics of soils; worked under the supervision of Prof. Radoslaw Michalowski of the Department of Civil and Environmental Engineering.
Appendix C

Visitor Profiles

Name: Rajmund Bacewicz
Professor, vice-rector for Research, and member of the WUT Dekaban Program Committee

Institution: Warsaw University of Technology
Home Department: Department of Physics
Warsaw University of Technology

Title: Professor

Address: Plac Politechniki 1, Room 112
00-661 Warsaw, Poland

Phone: (+48-22) 629-2632
Fax: (+48-22) 234-7140

E-Mail: prorektor.nauka@rekt.pw.edu.pl

Education: 1991 – DSc, Physics, Warsaw University of Technology
1980 – PhD, Physics, Warsaw University of Technology
1974 – MSc, Physics, University of Warsaw

Research Interests: Physics of triple semiconductors and photovoltaic materials

Dekaban Fund Activity: Visited University of Michigan in April 2013; met with a number of faculty with research interests in semiconductors and nano-manufacturing; vice-rector and member of the Dekaban Program Committee at WUT
Name: Piotr Wolański
Professor and chair, WUT Dekaban Program Committee

Institution: Faculty of Power and Aeronautical Engineering
Head of Division of Aircraft's Engines
Warsaw University of Technology

Title: Professor (since 1989)

Address: Nowowiejska St. 21/25
00-665 Warsaw, Poland

Phone: (+48-22) 234-5290

Fax: (+48-22) 825-0565

E-Mail: wolanski@itc.pw.edu.pl

Education: 1979 – DSc Warsaw University of Technology
1971 – PhD Warsaw University of Technology
1966 – MSc Warsaw University of Technology

Research Interests: Astronautics, aerospace engineering, internal combustion engines, explosions

Dekaban Fund Activity: Visited University of Michigan in April 2013 and presented a seminar in the Department of Aerospace Engineering; member of the Dekaban Committee at the Warsaw University of Technology since inception, and current chair of the Committee
Appendix D

Dekaban Fund Endowment Agreement

The Dr. Anatole S. and Pamela D. Dekaban Fund

Establishment of the Fund

Anatole S. and Pamela D. Dekaban ("donors") hereby pledge and promise to give an initial gift of $100,000 to the Regents of the University of Michigan to establish an endowment fund for the benefit of the College of Engineering. It is the intent of the donors to make additional gifts to increase the principal amount of the fund to $500,000, including a gift of real property acceptable to the University's Board of Regents. The Fund is to be named for the donors, the Dr. Anatole S. and Pamela D. Dekaban Fund. Further, it is the intent of the donors that the Regents accept future gifts to enhance this fund.

Purpose of the Dekaban Fund

It is the wish and goal of the donors to encourage the exchange of technical knowledge between advanced academic professionals in various fields of engineering at the Warsaw University of Technology and the University of Michigan. To help provide support for such an exchange, the wish of the donors is that the annual distributions from the Fund, in accordance with the University of Michigan's endowment distribution policy, be made available at the direction of the Dean of the College of Engineering to be applied for such exchanges of faculty, as provided herein.

Exchange Program

At the discretion and control of the College of Engineering, said annual distributions from the Dekaban Fund may be used for exchanges of any of the following ranks of faculty, namely:

(a) Two junior faculty from Warsaw University of Technology (with adequate English) to the University of Michigan College of Engineering annually, but not concurrently, for four to five months each person;

(b) One or two senior faculty from Warsaw University of Technology to College of Engineering annually for two weeks;

(c) Two senior faculty from College of Engineering to Warsaw University of Technology annually, and concurrently or individually, each year for three weeks each;

(d) One senior College of Engineering faculty to Warsaw University of Technology for a sabbatical term with the College striving to use its best effort to achieve three such faculty sabbatical terms in the consecutive five years following the full funding of the Dekaban Fund at the level of $500,000 for the endowment principal sum.
Depending on the level of annual distribution, the number of visitors as described in (a), (b) or (c) above can be appropriately increased. If by the end of any fiscal year, not all available monies have been disbursed, then 50% of the remaining sum should be added to the principal of the fund and 50% prorated to the next fiscal year.

If in the future, the Dean of the College of Engineering and the Prorektor of Warsaw University of Technology jointly determine that different numbers and categories of exchanges other than those listed under (a), (b), (c) and (d) would be more appropriate, such a change can be made through Addendum to the Agreement and by asking the donors or their designee for endorsement.

Implementation and Administration

The Dean of the College of Engineering hereby agrees to appoint a faculty committee to administer the application of the distributions for the purposes described herein; and, in consultation with Warsaw University of Technology Committee Chairman (ex-officio Prorektor), to review applicants, nominees, and candidates for exchange; and recommend same for selection at the sole discretion and determination of the Dean of the College, consistent with the University of Michigan policies, practices, and procedures for selection and appointment of faculty.

Moreover, at the discretion of the Dean of the College of Engineering, University of Michigan faculty visiting the Warsaw University may be allocated a portion of the Dekaban Fund's annual distributions to make available to those attending lectures, seminars, and other presentations by University of Michigan faculty, books, periodicals and other information technology relevant to said presentations but not exceeding 5% of the annual distribution.

The Associate Dean for Graduate Studies and Research for the College, in charge of the international programs of the College, will be an ex officio member of the committee and be responsible for providing donors or their designated heirs and their Advisory Council (to be established by the donors) with an annual report of program activities and a brief financial statement. The donors or their designee will acknowledge in writing the receipt of the financial report.

Inauguration of Fund

Donors intend to give an additional $20,000 that will be fully expendable at the discretion of the Dean of the College of Engineering, and not intended to enlarge the principal of the Dekaban Endowment Fund, to enable the College of Engineering to inaugurate exchanges, if administratively feasible, beginning in the academic year, 1993-94. In such event, the Dean or his delegate of senior rank will travel to Warsaw University of Technology to inaugurate the program.
University of Michigan Regents Gifts Policy

It is understood by the Donors undersigned that in accordance with Regents' Bylaws Section 3.05, all gifts are accepted by the University subject to the general policy of the Board that the wishes of donors with respect to their gifts, shall be loyally observed so long as, in the opinion of the Board, such wishes do not conflict with the proper administration of the University under changes that may develop in the course of time.

Governing Law and Venue

It is further understood that any disputes relating to the construction, interpretation, or enforcement of this agreement shall be governed by the law of the State of Michigan and shall be heard, decided, and resolved in Michigan.

IN WITNESS WHEREOF, the donors and the University by its duly authorized officer, have caused this agreement to be executed on or as of the __________ day of __________ 1993.

s/ Anatole S. Dekaban,
M.D., Ph.D.

s/ Pamela D. Dekaban

THE COLLEGE OF ENGINEERING

By
Peter M. Banks,
Its Dean

THE REGENTS OF THE UNIVERSITY OF MICHIGAN

By
Gilbert R. Whitaker,
Its Provost and Vice President for Academic Affairs