## Table of Contents

Executive Summary .................................................. 3

2017-18 Activities .................................................. 4

- Meetings of the Dekaban Program Committee in Warsaw ............... 4
- Dekaban Fellowship ............................................. 4
- Other activities .................................................. 7

Plans for 2018-19 .................................................. 9

In Memoriam ........................................................ 10

Financial Report .................................................. 11

Appendices ................................................................

- Appendix A: Dekaban Fund Advisory Council and Program Committee ...... i
- Appendix B: Dekaban Fellow Profile ................................ iii
- Appendix C: Dekaban Fund Endowment Agreement .......................... iv
Executive Summary

The Dekaban Fund was initiated with the gift of Dr. Anatole S. and Mrs. Pamela D. Dekaban in 1993. The overarching motivation for the Dekaban Program is to create opportunities for the exchange of technical knowledge between faculty members in various fields of engineering at the Warsaw University of Technology (WUT) in Poland and the University of Michigan (U-M) College of Engineering (CoE) in Ann Arbor. This is facilitated, in part, by sponsorship of fellowships for junior faculty members from WUT to the U-M. In fiscal year 2017-18, the College of Engineering hosted one Dekaban Fellow for twelve months; this Fellow worked directly with the faculty of the Department of Chemical Engineering.

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/).
2017-2018 Activities

Meetings of the Dekaban Program Committee in Warsaw

The Dekaban Program Committee held two meetings in Warsaw during FY 2018. The Committee discussed program activities and the recruiting strategy for Dekaban Fellowships at the first of these, held on February 26, 2018. Subsequently, the availability of Dekaban Fellowships was broadly advertised throughout all WUT departments, and the candidates were interviewed after the second meeting on May 24, 2018. One candidate was selected for 2018-19 Dekaban Fellowships.

The Committee approved Dr. Beata Jaworska, an assistant professor at the Faculty of Civil Engineering at WUT as the 2018-19 Dekaban Fellow. She will spend 12 months in Ann Arbor, working with Professor Victor Li in the Department of Civil and Environmental Engineering, U-M College of Engineering.

Dekaban Fellowship

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. Potential Dekaban Fellows are recruited from the rank of assistant professors at WUT. Dekaban Fellows are matched with U-M faculty members who do research in similar areas, and play the role of mentors. Typically, over the period of their fellowships, Dekaban Fellows collaborate with the research groups of their mentors.

Dr. Sabina Wilkanowicz arrived in Ann Arbor at the end of September 2017 as the 2017-18 Dekaban Fellow. Dr. Wilkanowicz spent a full year as a visiting research scientist in the Department of Chemical Engineering.

At Warsaw University of Technology, Dr. Sabina Wilkanowicz serves as an assistant professor within the Faculty of Civil Engineering, Mechanics and Petrochemistry at the Plock Campus of WUT. In the classroom, she teaches chemical technology, biotechnology and chemical processes.
in petrochemistry to undergraduate and graduate-level students. As a researcher, Dr. Wilkanowicz’s work focuses on biodiesel fuel and petrochemistry, with an emphasis on applying nanotechnology, especially electrohydrodynamic processing, in the manufacturing of biodiesel fuel. One of her recent projects involves immobilizing catalysts through the electrohydrodynamic process, which are then used in the conversion of vegetable oil into biodiesel fuel. After the biodiesel fuel is produced, the catalysts can be easily and quickly removed from the fuel due to the immobilization. It is critical to remove the catalysts so that an engine can operate properly.

As a researcher at the University of Michigan (U-M), Dr. Wilkanowicz’s primary goal was to learn more about nanotechnology and polymers. Under the supervision of Professor Ronald Larson, Dr. Wilkanowicz sought to understand how polyelectrolyte brushes behave in different salt solutions, concentrations and pH environments. While this topic is still new and underdeveloped, Dr. Wilkanowicz hopes that future research can be used in the pharmaceutical industry, with potential applications such as improving the effectiveness of drug delivery.

Additionally, Dr. Wilkanowicz continued her work in catalyst immobilization. By using electrohydrodynamic processing, she was able to produce “mats,” which are essentially sheets of polymeric material that have catalysts either inside or affixed to the fibrous surface. One benefit of this research is that she is now able to reuse catalysts during transesterification (converting vegetable oil to biodiesel fuel). Furthermore, she no longer needs to water wash the fuel to clean it from the catalyst, which ultimately creates fewer pollutants and waste in the environment.

Alongside her fellow researchers, Dr. Wilkanowicz is finishing two manuscripts, one of which will be published in both Macromolecules and Polymers journals. Their collective work was presented at the American Institute of Chemical Engineers national conference in October.

Dr. Wilkanowicz commented that this fellowship has taught her to think more broadly while conducting research. She also noted that she greatly benefited from observing the teaching styles of U-M faculty. From time to time, she would attend Professor Brian Love’s classes on polymers, and became inspired by his encouragement of students to learn from hands-on experience, rather than just lectures. Lastly, she gained experience with state-of-the-art equipment, such as the scanning transmission electron microscope and the quartz crystal microbalance with dissipation (QCM-D), which are in limited supply in Poland. Exposure to these tools opened her eyes to entirely new methods of analysis and their applications.
During her time in the United States, Dr. Wilkanowicz was able to travel extensively, including visits to Cape Canaveral, Chicago, Niagara Falls, Yellowstone Park, Mount Rushmore, and many destinations within Michigan. Besides travel, she dedicated her free time to volunteering with the Lions Club, a nonprofit organization that helps people with vision disabilities. As a volunteer, she assisted in checking children’s vision in Ypsilanti, MI, and met with veterans at the Veterans Affairs Ann Arbor Hospital.

In Yellowstone Park, with the hot springs in the background.
**Other Activities**

**Professor Mirko Gamba of Aerospace Engineering visits Warsaw University of Technology**

In September of 2017, Assistant Professor Mirko Gamba visited Warsaw University of Technology and the Institute of Aviation in Warsaw. The scope of his visit also included participation in the XXIII International Symposium on Combustion Processes, held in Rynia, Poland, September 3-6, 2017.

Prof. Gamba visited the Department of Power and Aeronautical Engineering at WUT, where he interacted with the groups with research interests very close to his. In particular, Prof. Gamba has interacted with Professors Piotr Wolanski and Jan Kindracki. He visited their research facilities, and discussed their current projects and common interests. Prof. Gamba also visited the Aerodynamics Research Laboratory, the Laboratory of Propellants, and the Laboratory of Space Propulsion at the Institute of Aviation in Warsaw.

At the dinner reception at the XXIII International Symposium on Combustion Processes (from left to right): Prof. Bing Wang (Tsinghua University, China), Prof. Piotr Wolanski (Warsaw University of Technology), Prof. Mirko Gamba (U-M), Mr. Michal Kawalec (Institute of Aviation), Prof. Jan Kindracki (Warsaw University of Technology), Prof. Edyta Dzieminska (Sophia University, Japan)

During his participation in the XXIII International Symposium on Combustion Processes, Prof. Gamba had the opportunity to meet with many researchers from Central and Eastern Europe, who share his interests in the field of combustion. While attending the symposium, Prof. Gamba visited the ruins of the XIX Century Fortress of Modlin.
An outcome of the visit is an attempt at initiating a collaborative work with Prof. Piotr Wolanski of WUT on the development of new energy conversion systems.

*View of the Modlin Fortress at the confluence of Vistula and Narew rivers*
Plans for 2018-2019

Dr. Beata Jaworska was selected as the 2018-19 Dekaban Fellow. She is an assistant professor at the Warsaw University of Technology, the Faculty of Civil Engineering. She joined the CoE Department of Civil and Environmental Engineering in late September of 2018, and will collaborate with Professor Victor Li, staying in Ann Arbor for 12 months.

Dr. Beata Jaworska
2018-19 Dekaban Fellow
In Memoriam

It is with great sadness that we include this note. The long-term chair of the Dekaban Fund Advisory Council, Dr. Thaddeus Radzilowski, passed away on July 20, 2018. Dr. Radzilowski was at the birth of the Dekaban Fund, and over the last 25 years provided advice to the Fund leaders.

Dr. Thaddeus Radzilowski was a celebrated historian. He taught at several universities, including the University of Michigan, and he served as President of St. Mary’s College in Orchard Lake, Michigan. Since 2003, he was the president of the Piast Institute, a national research center devoted to Polish and Polish American affairs. In 1999, Dr. Radzilowski was presented with the Cavaliers Cross of the Polish Order of Merit by the President of Poland. Besides his efforts in preserving Polish heritage in the U.S., Dr. Radzilowski was an American patriot, a veteran of the U.S. armed forces who served his country in Vietnam.
Appendices

Appendix A

Dekaban Fund Advisory Council and Program Committee

Dekaban Fund Advisory Council:

Anna Bielinska, Ph.D.
University of Michigan
1652 Golden Lane
Ypsilanti, MI 48198
734-647-0052
abielins@umich.edu

Yvonne Bankowski
707 S. Vermont
Royal Oak, MI 48067
313-322-3599
ybankows@ford.com

Karen Majewski
Mayor, City of Hamtramck
2627 Pulaski
Hamtramck, MI 48212
313-365-9229
kmajewska@comcast.net

Waldek Raczkowski
Ford Motor Company
35126 Glengary Circle
Farmington Hills, MI 48331
248-514-0461
wraczkow@ford.com

Geneva Rivera
Piast Institute, Veterans Benefits
11633 Joseph Campau
Hamtramck, MI 48212
313-733-4535
mrivera@piastinstitute.org
**Dekaban Program Committee at the Warsaw University of Technology:**

Professor Anna Siemińska-Lewandowska, Chair  
Professor Rajmund Bacewicz, *ex-officio*, WUT Vice-Rector for Research  
Dr. Robert Mroczyński  
Professor Piotr Wolański

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

Professor Radoslaw L. Michalowski
Appendix B

Dekaban Fellow Profile

Name: Sabina Wilkanowicz
Assistant Professor, 2017-2018 Dekaban Fellow

Institution: University of Michigan College of Engineering
Department of Chemical Engineering
Home Department: Faculty of Civil Engineering, Mechanics and Petrochemistry, Warsaw University of Technology (Campus in Plock), and Institute of Chemistry

Title: Visiting Assistant Research Scientist

Address: 09-402 Plock, Lukasiewicza 16, Poland

Mail: sabina.wilkanowicz@pw.edu.pl

Education: 2013 – PhD in Chemical Sciences, Gdansk University of Technology
2008 – MSE in Biotechnology, Gdansk University of Technology

Research Interests: Bio- and Nano-technology in cosmetic, pharma, food and biomedicine science and industry. Implants construction with usage of electrohydrodynamic (EHD) processing. EHD processing in petrochemistry.

Dekaban Fund Activity: Dekaban Fellow, October, 2017 – September, 2018; research in Chemical Engineering Department, BioInterphases Laboratory under prof. Ronald Larson supervision.

Project 1: Study of Polyacrylic Acid (PAA) polyelectrolyte brush behavior in different environments, e.g., pH, solution ion type, solution ion concentration, using ellipsometry and Quartz Crystal Microbalance with Dissipation (QCM-D).

Project 2: EHD processing in CaO catalyst immobilization inside polymeric nanofibers. Immobilized catalyst can be used then in transesterification reaction of vegetable oils to produce biodiesel fuel.
Appendix C

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 _23_ day of _SEPTEMBER_ 1993.

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

/s/ Pamela D. Dekaban

THE COLLEGE OF ENGINEERING     THE REGENTS OF THE UNIVERSITY OF MICHIGAN

By Peter M. Banks, Its Dean By Gilbert R. Whitaker, Its Provost and Vice President for Academic Affairs