

All members, families and friends of Polish-American Engineers Association are cordially invited to attend our April 2008 meeting.

**DATE:** Friday, April 18, 2008

**TIME:** 7:30 – 8:00 pm Social time  
8:00 pm – Business and Technical Session

**PLACE:** Copernicus Center  
5216 West Lawrence Ave.  
Chicago, Illinois

**SPEAKER:** Mr. Jacek Szostka  
DORALCO – CAD/CAM engineer  
CNC Programmer-Metals/Manufacturing

**TOPIC:** Computer simulation techniques used in engineering analysis in aviation selected problems

**Mr. Jacek Szostka** was a student of Warsaw University of Technology (Warsaw Polytechnic) in the Faculty of Power and Aeronautical Engineering since 1991. During that time he was a lecturer and promoter. From 1996, Jacek Szostka participated in the program PW-6 as a team member. The program included construction of a two-seat glider PW-6, building the prototype and production instrumentation. This glider was a continuation of a world class glider PW-5 which in 1993 was chosen by Federation Aeronautique Internationale (FAI) as a monotype World Class Glider. The topic of his master thesis was a project of marching driving device of PW-6 glider. The project also included the workshops consisting of building the prototype of the PW-6 glider. In 2001 PW-6 glider was awarded a special prize by the Prime Minister of Poland.

Mr. Jacek Szostka has been employed in the Institute of Aviation as an assistant for almost seven years. Institute of Aviation is a leading scientific establishment in Poland specializing in advanced aviation technologies. Institute cooperates in areas of design, computations, and research with world reputable companies such as General Electric, Pratt & Whitney, and various European consortiums. During his work in the Institute of Aviation, Mr. Szostka was working on numerical computations FEM and in this area he was trained and received occupational experience. The scope of the works carried out by Mr. Szostka concerned mostly composite dispositional airplane I-23 Manager and two-seat helicopter IS-2. From the more interesting works accomplished by the postgraduate student, it is worth to mention his participation in following projects:

- European Grant within the TAURUS project (program 5EU) – extension of validation of the TAURUS program by nonlinear structure's response ("Technology development for aero elastic simulations on unstructured grids" – RTD)
- Kinetic Container of Kinetic Energy, which utilized spatial composite's model
- Elaboration of new method of fatigue durability if air-structures are loaded by acoustic loads.

In 2004 his team won a second place in competition at the Warsaw Institute of Aviation for the best team performance in research area. The area of Mr. Szostka's research concerns: numerical computations with Finite Element Method (FEM), vibroacoustics, composite constructions and utilizing Neural Networks in damage detection. The high scientific quality of the topics carried out by Mr. Jacek Szostka induced the management of Institute of Aviation in May 2005 to refer him to Warsaw Technical University towards formal beginning of a doctorate. The Board of Doctorate Studies approved the topic of his thesis to be: "Methods of damage detection in the coverings of composite structures".

His extensive experience in scientific field has allowed him exposure to numerous faces of Mechanical Engineering, including 3D modeling, CAD/CAM related to manufacturing, Strength of Materials/Structural/Vibration analysis involving the use of Finite Element Analysis (FEA) techniques, problems connected with natural and forced vibration oscillations due to exploitation, studies regarding waste and construction failure, mechanical fatigue and diagnostics of metal and composite structure. Particularly interesting is his expert knowledge of hybrid methods of connection between steel and composite structures where he used bolts and glue as means of lowering concentration of stress. This approach improves fatigue durability, helps avoiding manufacturing errors and enables zeroing of clearances, which makes this solution very practical and economical.

Presently Jacek Szostka is employed by DORALCO as CAD/CAM engineer and CNC Programmer specializing in Metals/Manufacturing, design tooling, operation and maintenance for all the shop machining and molding equipment, fixtures, hand tools, and manuals. During the weekends he works at the BIR Training Center as CAD/CAM (CNC) instructor, teaching CAD/CAM, Master Cam, and AutoCAD, mathematics, blueprint & quality control.

A business meeting will precede the technical presentation. Coffee and pastries will be served during the intermission.

SPECIAL INVITATION for Polish engineers and technicians who recently came to Chicago.

**Polish American Engineers will participate in the May 3<sup>rd</sup> celebration. All members are urged to join us for the parade on Columbus Drive on Saturday May 3rd. More details will be provided during the monthly meeting.**

**COUNCIL OF POLISH ENGINEERS IN NORTH AMERICA** is organizing a Symposium at the Polish Consulate in New York on Monday, April 28, 2008. Subject of the Symposium will be: Innovation, Technology Transfer, Education and Implementation. The meeting will be attended by representatives of Polish and American Technical Universities with representatives from Polonia Technica and other Polish Engineering Organizations. PAEA will be represented at this gathering by our President Mr. Michael Niedzinski.

**ELECTIONS AT POLISH AMERICAN CONGRESS (PAC).** Elections were held on March 26, 2008 at the offices of Polish National Alliances, 6100 N. Cicero Ave. in Chicago. A great success was accomplished by Casey Chlebek, a long time member of our organization who won a second place in the election for the President of Polish American Congress, Illinois Division. Casey received support from numerous Polish organizations in Chicago He is now in a very strong position for the next year elections. Polish American Congress promotes civic, educational and cultural programs not only to further the knowledge of Polish history, language and culture but also to stimulate involvement of the Polish American Community in the main stream of American life. PAEA is represented at the Polish America Congress by: Ryszard Kaczmarek, Michael Niedzinski and Jan Plachta.

**RALPH MODJESKI SCHOLARSHIP.** As in previous years we will be accepting scholarship applications. Amount of scholarships will depend on the results of our fundraising efforts. Applications will be received by the end of May 2008. Scholarship Committee will perform review during June 2008, and award is scheduled for our September meeting. For applications or additional information please check our website: [www.polishengineers.org](http://www.polishengineers.org) or call Miroslaw Niedzinski 773-415-1818, Jan Plachta 773-775-7599 or Walter Rymysza 847-806-1704.