

Ph.D. Project Proposal Fellowship Programme in Engineering edition 2013 B

Annex 01.

List of projects proposal: UNESCO-AGH Chair edition 2013 B in Engineering

Project number: 01. Project title: The technical condition monitoring system of industrial facilities operating in hazardous conditions. Field of research: Automation and Monitoring. Host Institution: AGH University of Science and Technology, Faculty of Mechanical Engineering and Robotics, Krakow, Poland. Supervisor: prof. dr hab. inż. Janusz Szpytko. Phone: +48 12 617 3103; E-mail: szpytko@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mechanical engineering, automation and monitoring/ diagnostics/ construction engineering. Number fellowships: 1.

Project number: 02. Project title: Static and dynamic modeling of reservoir (water and hydrocarbon) on the basis of well logging and laboratory data. Field of research: Earth Sciences. Host Institution: AGH University of Science and Technology, Faculty of Geology, Geophysics and Environmental Protection, Krakow, Poland. Supervisor: prof. dr hab. inż. Jadwiga Jarzyna. Phone: +48 12 617 2421; E-mail: jarzyna@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, applied geophysics or petroleum geology. Number fellowships: 1.

Project number: 03. Project title: Geology, mineralogy and condition of formation of the Pb-Zn mineralization in the Cerpula prospect. Field of research: Economic Geology. Host Institution: AGH University of Science and Technology, Faculty of Geology, Geophysics and Environmental Protection, Krakow, Poland. Supervisor: dr hab. Jaroslav Prsek. Phone: +48 12 617 2098; E-mail: prsek@geol.agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, economic geology. Number fellowships: 1.

Project number: 04. Project title: E-economy and E-society – New technologies and their influence in social and economic life. Field of research: Economic Sociology. Host Institution: AGH University of Science and Technology, Faculty of Humanities, Krakow, Poland. Supervisor: dr hab. Maria Nawojczyk, prof. AGH. Phone: +48 12 617 4381; E-mail: maria@list.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, economics or management. Number fellowships: 1.

Project number: 05. Project title: Laser biotechnology for environmental management of selected regions. Field of research: Environmental Protection Engineering and Biotechnology. Host Institution: AGH University of Science and Technology, Faculty of Mining Surveying and Environmental Engineering, Krakow, Poland. Supervisor: prof. dr hab. inż. Jan W. Dobrowolski. Phone: +48 12 617 2253; E-mail: dobrowol@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, environmental protection engineering and biotechnology. Number fellowships: 2.

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Ph.D. Project Proposal Fellowship Programme in Engineering edition 2013 B

Project number: 06. Project title: The geotouristic values assessment based on selected geological objects. Field of research: Geotourism. Host Institution: AGH University of Science and Technology, Faculty of Geology, Geophysics and Environmental Protection, Krakow, Poland. Supervisor: Prof. dr hab. inż. Tadeusz Słomka; Phone: +48 12 617 2603; E-mail: tslomka@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, geology, geophysics and environmental protection, general knowledge in geotourism. Number fellowships: 1.

Project number: 07. Project title: Modeling the effect of dynamic loading on engineering infrastructure. Field of research: Mechanical Engineering. Host Institution: AGH University of Science and Technology, Faculty of Mechanical Engineering and Robotics, Krakow, Poland. Supervisor: dr hab. inż. Jan Targosz. Phone: +48 12 617 3675; E-mail: jantargosz@interia.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mechanical engineering, transport engineering, construction engineering. Number fellowships: 1.

Project number: 08. Project title: Improving processes of preliminary concentration of mining product. Field of research: Mechanical and Mining Engineering. Host Institution: AGH University of Science and Technology, Faculty of Mechanical Engineering and Robotics, Krakow, Poland. Supervisor: prof. dr hab. inż. Antoni Kalukiewicz. Phone: +48 12 6173681; E-mail: akaluki@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mechanical engineering, mining engineering. Number fellowships: 3.

Project number: 09. Project title: The development of automated equipment for de-icing highways and pavements. Field of research: Mechanical and Transport Engineering. Host Institution: AGH University of Science and Technology, Faculty of Mechanical Engineering and Robotics, Krakow, Poland. Supervisor: prof. dr hab. inż. Janusz Szpytko. Phone: +48 12 617 3103; E-mail: szpytko@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mechanical engineering, automation and monitoring/ diagnostics/ construction engineering. Number fellowships: 1.

Project number: 10. Project title: Influence of coal properties on productivity of coalbed methane wells by use of computer simulation. Field of research: Mining Engineering, Gas Reservoir Engineering. Host Institution: AGH University of Science and Technology, Faculty of Drilling, Oil and Gas, Krakow, Poland. Supervisor: dr hab. inż. Jerzy Stopa, prof. AGH UST. Phone: +48 12 617 2782; E-mail: stopa@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mining engineering, petroleum engineering. Number fellowships: 1.

Project number: 11. Project title: Modelling and optimisation of the mining production in conditions of uncertainty and risk with the use of fuzzy logic. Field of research: Mining Engineering, Geological Engineering. Host Institution: AGH University of Science and Technology, Faculty of Mining and Geoengineering, Krakow, Poland. Supervisor: dr hab. inż. Edyta Brzychczy, prof. AGH UST. Phone: +48 12 617 2098; E-mail: nawstan@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mining engineering. Number fellowships: 1.

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Project number: 12. Project title: Assessment of the applicability of the chambers with an open water circuit in underground mines. Field of research: Mining Engineering, Geological Engineering. Host Institution: AGH University of Science and Technology, Faculty of Mining and Geoengineering, Krakow, Poland. Supervisor: dr hab. inż. Stanisław Nawrat, prof. AGH UST. Phone: +48 12 617 2154; E-mail: nawstan@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mining engineering. Number fellowships: 1.

Project number: 13. Project title: Formal methods in software engineering. Field of research: Software Engineering. Host Institution: AGH University of Science and Technology, Faculty of Electrical Engineering, Automatics, Computer Science and Biomedical, Krakow, Poland. Supervisor: prof. dr hab. inż. Tomasz Szmuc. Phone: +48 12 617 2040; E-mail: tsz@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, software engineering. Number fellowships: 1.

Project number: 14. Project title: Modeling and verification of software based on business logic. Field of research: Software Engineering. Host Institution: AGH University of Science and Technology, Faculty of Electrical Engineering, Automatics, Computer Science and Biomedical, Krakow, Poland. Supervisor: prof. dr hab. inż. Tomasz Szmuc. Phone: +48 12 617 2040; E-mail: tsz@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, software engineering. Number fellowships: 1.

Project number: 15. Project title: Maintenance platform for transport system in manufacture. Field of research: Transport Engineering. Host Institution: AGH University of Science and Technology, Faculty of Mechanical Engineering and Robotics, Krakow, Poland. Supervisor: prof. dr hab. inż. Janusz Szpytko. Phone: +48 12 617 3103; E-mail: szpytko@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mechanical engineering, automation and monitoring/ transport engineering/ construction engineering. Number fellowships: 1.

Project number: 16. Project title: Availability e-support tool for transport system in manufacture. Field of research: Transport Engineering. Host Institution: AGH University of Science and Technology, Faculty of Mechanical Engineering and Robotics, Krakow, Poland. Supervisor: prof. dr hab. inż. Janusz Szpytko. Phone: +48 12 617 3103; E-mail: szpytko@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. degree, mechanical engineering, automation and monitoring/ transport engineering/ construction engineering. Number fellowships: 1.

Project number: 17. Project title: Environmental impact reduction during the unconventional gas extraction technology. Field of research: Gas Engineering. Host Institution: AGH University of Science and Technology, Faculty of Drilling, Oil and Gas, Krakow, Poland. Supervisor: prof. dr hab. inż. Stanisław Nagy. Phone: +48 12 617 2209; E-mail: stanislaw.nagy@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. Eng., with background of petroleum engineering, chemical engineering or energy geosystems, with interest in geo/petro- computer modeling. Number fellowships: 1.

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Project number: 18. Project title: Hydraulic fracture model sensitivity analyses of selected shale gas reservoirs. Field of research: Gas Engineering. Host Institution: AGH University of Science and Technology, Faculty of Drilling, Oil and Gas, Krakow, Poland. Supervisor: prof. dr hab. inż. Stanisław Nagy. Phone: +48 12 617 2209; E-mail: stanislaw.nagy@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. Eng., with background of petroleum engineering, chemical engineering or energy geosystems, with interest in geo/petro- computer modeling. Number fellowships: 1.

Project number: 19. Project title: Geomechanical analysis coupled with dynamic flow modeling as a tool for reduce risk during safe CO₂ injection into reservoir. Field of research: Gas Engineering. Host Institution: AGH University of Science and Technology, Faculty of Drilling, Oil and Gas, Krakow, Poland. Supervisor: prof. dr hab. inż. Stanisław Nagy. Phone: +48 12 617 2209; E-mail: stanislaw.nagy@agh.edu.pl. Full address of the institution: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland. Countries: Africa, Asia, Latin America, Caribbean and Pacific Regions. Duration: from October 1, 2013. Language: English. Academic requirements: M.Sc. Eng., with background of petroleum engineering, chemical engineering or energy geosystems, with interest in geo/petro- computer modeling. Number fellowships: 1.

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Annex 02.

*Table of projects proposal: Ph.D. projects edition 2013 B in Engineering;
 List of invited Member States per region and field of research as determined
 by the Polish Authorities*

Project number	Field of Research/ Project Title (number of positions)	Invited Member States per Region – see List
01	Automation and Monitoring (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
02	Earth Sciences (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
03	Economic Geology (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
04	Economic Sociology (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
05	Environmental Protection Engineering and Biotechnology (2)	Africa, Asia, Latin America, Caribbean and Pacific Regions
06	Geotourism (2)	Africa, Asia, Latin America, Caribbean and Pacific Regions
07	Mechanical Engineering (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
08	Mechanical and Mining Engineering (3)	Africa, Asia, Latin America, Caribbean and Pacific Regions
09	Mechanical and Transport Engineering (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
10	Mining and Gas Reservoir Engineering (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
11	Mining and Geological Engineering (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
12	Mining and Geological Engineering (1)	Africa, Asia, Latin America, Caribbean and Pacific Regions
13, 14	Software Engineering (2)	Africa, Asia, Latin America, Caribbean and Pacific Regions
15, 16	Transport Engineering (2)	Africa, Asia, Latin America, Caribbean and Pacific Regions
17, 18, 19	Gas Engineering (3)	Africa, Asia, Latin America, Caribbean and Pacific Regions
	Total positions: 23	

Done: Krakow, June 26th, 2013