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Division of National Commissions and Civil Society**

United Nations  
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Cultural Organization

Organisation  
des Nations Unies  
pour l'éducation,  
la science et la culture

Organización  
de las Naciones Unidas  
para la Educación,  
la Ciencia y la Cultura

Организация  
Ъединенных Наций по  
вопросам образования,  
науки и культуры

منظمة الأمم المتحدة  
للقربية والعلم والثقافة

联合国教育、  
科学及文化组织



UNESCO Chair for  
Science, Technology  
and Engineering  
Education  
Krakow, Poland



AGH  
AGH UNIVERSITY OF SCIENCE  
AND TECHNOLOGY

To: National Commissions for UNESCO  
of Invited Member States  
(see Annex I)

Ref. : ERI/NCS/FLP/LZF/12.140

6 March 2012

Subject : UNESCO/POLAND Co-Sponsored Fellowships Programme Engineering  
cycle 2012

Madam/Sir,

I am pleased to inform you that, within the framework of the UNESCO/Poland Co-Sponsored Fellowships Programme, cycle 2012, in Engineering, the Polish National Commission for UNESCO and the UNESCO Chair for Science, Technology and Engineering at the AGH University of Science and Technology in Krakow have placed at the disposal of certain Member States (see Annex I) **twenty-two (21)** fellowships of **six (6)** months duration in Poland starting on 1<sup>st</sup> October 2012. Beneficiaries of these fellowships will be given the opportunity to undertake an individual research programme in the field of **Science, Technology and Engineering**.

The annexes to this letter provide detailed information regarding the qualifications required, the facilities offered, the general conditions governing the award of fellowships and the procedure for submission of applications as well as different fields of research proposed at the selected host institution.

This programme is offered in open competition. Only candidates with the necessary qualifications, who meet the criteria stipulated in the annexes, will have a chance to be selected. The applications should be addressed to: Ali Zaid, Chief, Fellowships Programme Section, UNESCO, 7, place de Fontenoy – 75352 Paris 07 SP (France), **by 15 May 2012 at the latest**.

Please accept, Madam/Sir, the assurances of my highest consideration.

Ali Zaid (Mr)  
Chief, Fellowships Programme Section

cc: Permanent Delegations to UNESCO of Invited Member States  
Polish National Commission for UNESCO  
Permanent Delegation of the Republic of Poland to UNESCO  
AGH University of Science and Technology (AGH-UST)  
UNESCO Field Offices (of invited countries)

Enclosures: Annex I (List of Invited Member States per field of studies)  
Annex II (Terms of Conditions)  
Annex III (Qualifications required per field of study)  
UNESCO Fellowship Application Form  
Certificate of Language Knowledge

7, place de Fontenoy  
75352 Paris 07 SP, France  
Tél : +33 (0)1 45 68 13 13  
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E-Mail: [lzas-friz@unesco.org](mailto:lzas-friz@unesco.org)

## UNESCO/POLAND CO-SPONSORED FELLOWSHIPS PROGRAMME 2012

List of Invited Member States per region and field of research as determined by the Polish authorities

Please refer to the list of invited Member States entitled to submit applications hereunder.

Project No.	FIELD OF RESEARCH/PROJECT TITLE (number of fellowships)	INVITED MEMBER STATES PER REGION	LIMIT OF AGE
1	Automation Engineering (2) <i>Transportation system telematics.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 40 years of age
2	Computer Science (1) <i>Development of the model of the transformation from ferrite-pearlite to austenite during heating in the continuous annealing of the Advanced High Strength Steels (AHSS).</i>	Asia and the Pacific	no more than 26 years of age
3	Decision Engineering.(2) <i>Problem base engineering.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 40 years of age
4	Drilling (1) <i>Analysis of Hydraulic Fracturing Process.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 45 years of age
5	Economic Geology (1) <i>Noble metals in porphyry copper deposits in Chile.</i>	Chile, Peru	no more than 25 years of age
6	Economic Geology (1) <i>Copper and associated mineralization and its lithostratigraphical and tectonic context in the Neoproterozoic succession from selected sites in NW Botswana.</i>	Botswana, Namibia	no more than 45 years of age
7	Economic Sociology (1) <i>Interrelations between new technologies and social and economic life in globalizing world.</i>	Europe, Asia and the Pacific, Africa, Arab State, Latin America and the Caribbean	no more than 45 years of age
8	Geoengineering (1) <i>Rock Properties Influence on Injection Performance.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 45 years of age
9	Material Engineering and Ceramic (1) <i>Fine ceramic materials and glazes</i>	Africa, Arab State, Asia and the Pacific	no more than 40 years of age
10	Material Engineering and Ceramic (1) <i>Influence of some additives on basic parameters of sanitary body or glazes.</i>	Africa, Arab State, Asia and the Pacific	no more than 40 years of age
11	Material Engineering and Ceramic (1) <i>SHS derived nanolaminates in Ti-Al-C-N system.</i>	Africa, Arab State, Asia and the Pacific	no more than 40 years of age
12	Mechanical Engineering Technology (2) <i>Availability problems in transportation systems and devices</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 40 years of age
13	Mechanics (1) <i>Availability problems in transportation systems and devices</i>	Asia and the Pacific	no more than 35 years of age
14	Petrophysics (1) <i>Reservoir geophysics – combining well log data and laboratory data.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 35 years of age
15	Software Engineering (1) <i>Smart methodologies for software development</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 35 years of age
16	Solid State Physics (1) <i>Studies Magnetostriction In Stoichiometric and Doped Magnetite Single Crystals.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 40 years of age
17	Transport Engineering (2) <i>Transportation technology systems and devices.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than 40 years of age
	Total fellowships: 21		

## **AFRICA**

(46 Member States)

- Angola
- Benin
- Botswana
- Burkina Faso
- Burundi
- Cameroon
- Cape Verde
- Central African Republic
- Chad
- Comoros
- Congo
- Côte d'Ivoire
- Democratic Republic of the Congo
- Djibouti
- Equatorial Guinea
- Eritrea
- Ethiopia
- Gabon
- Gambia
- Ghana
- Guinea
- Guinea-Bissau
- Kenya
- Lesotho
- Liberia
- Madagascar
- Malawi
- Mali
- Mauritius
- Mozambique
- Namibia
- Niger
- Nigeria
- Rwanda
- Sao Tome and Principe
- Senegal
- Seychelles
- Sierra Leone
- Somalia
- South Africa
- Swaziland
- Togo
- Uganda
- United Republic of Tanzania
- Zambia
- Zimbabwe.

## **ARAB STATES**

(1 Member State)

- Sudan

## **ASIA AND THE PACIFIC**

(35 Member States and 2 Associated Members)

- Afghanistan
- Bangladesh
- Bhutan
- Cambodia
- China
- Fiji
- India
- Indonesia
- Japan
- Kazakhstan
- Kiribati
- Kyrgyzstan
- Lao People's Democratic Republic
- Malaysia
- Maldives
- Mongolia
- Myanmar
- Nauru
- Nepal
- Niue
- Pakistan
- Palau
- Papua New Guinea
- Philippines
- Samoa
- Sri Lanka
- Tajikistan
- Thailand
- Timor-Leste
- Tonga
- Turkmenistan
- Tuvalu
- Uzbekistan
- Vanuatu
- Viet Nam.

Associated Members:

- Macao China (Associate Member)
- Tokelau (Associate Member)

## **EUROPE**

(7 Member States)

- Armenia
- Azerbaijan
- Belarus
- Georgia
- Republic of Moldova
- Russian Federation
- Ukraine.

## **LATIN AMERICA AND THE CARIBBEAN**

(31 Member States)

- Argentina
- Barbados
- Belize
- Bolivia (Plurinational State of)
- Brazil
- Chile
- Colombia
- Costa Rica
- Cuba
- Dominica
- Dominican Republic
- Ecuador
- El Salvador
- Grenada
- Guatemala
- Guyana
- Haiti
- Honduras
- Jamaica
- Mexico
- Nicaragua
- Panama
- Paraguay
- Peru
- Saint Kitts and Nevis
- Saint Lucia
- Saint Vincent and the Grenadines
- Suriname
- Trinidad and Tobago
- Uruguay
- Venezuela (Bolivarian Republic of).

## UNESCO/POLAND CO-SPONSORED FELLOWSHIPS PROGRAMME 2012

With a view to promoting human resource capacities in the developing countries and to enhancing international understanding and friendship among nations and the people of Poland, the Polish National Commission for UNESCO and the UNESCO Chair for Science, Technology and Engineering at the AGH University of Science and Technology in Krakow are placing at the disposal of UNESCO **twenty-one (21)** fellowships of **six (6)** months duration starting on 1<sup>st</sup> October 2012 for the benefit of Member States listed in Annex I. Beneficiaries of these fellowships will be given the opportunity to undertake an individual research programme in the field of **Science, Technology and Engineering**.

Details regarding the fellowships offered and the criteria of selection are listed below. The Polish authorities will make the final decision.

### A. FIELD OF RESEARCH

Fields of research proposed under the UNESCO/Poland Co-Sponsored Fellowships Programme 2012 by the Polish National Commission for UNESCO and AGH University of Science and Technology, are listed as follows (see Annex III):

1. Field of research: **Automation Engineering**. Project no: **01**. Project title: *Transportation system telematics*.  
**Countries:** Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean  
Number UNESCO fellowships: 2. (limit of age: no more than 40 years old)
2. Field of research: **Computer Science**. Project no: **02**. Project title: *Development of the model of the transformation from ferrite-pearlite to austenite during heating in the continuous annealing of the Advanced High Strength Steels (AHSS)*.  
**Countries:** Asia.  
Number UNESCO fellowships: 1. (limit of age: no more than 26 years old)
3. Field of research: **Decision Engineering**. Project no: **03**. Project title: *Problem base engineering*.  
**Countries:** Africa, Arab State, Asia and Pacific, Latin America and the Caribbean  
Number UNESCO fellowships: 2. (limit of age: no more than 40 years old)
4. Field of research: **Drilling**. Project no: **04**. Project title: *Analysis of Hydraulic Fracturing Process*.  
**Countries:** Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean and Pacific.  
Number UNESCO fellowships: 1 (limit of age: no more than 45 years old)
5. Field of research: **Economic Geology**. Project no: **05**. Project title: *Noble metals in porphyry copper deposits in Chile*.  
**Countries:** Chile or Peru.  
Number UNESCO fellowships: 1 (limit of age: no more than 25 years old)
6. Field of research: **Economic Geology**. Project no: **06**. Project title: *Copper and associated mineralization and its lithostratigraphical and tectonic context in the Neoproterozoic succession from selected sites in NW Botswana*.  
**Countries:** Botswana, Namibia.  
Number UNESCO fellowships: 1 (limit of age: no more than 45 years old)
7. Field of research: **Economic Sociology**. Project no: **07**. Project title: *Interrelations between new technologies and social and economic life in globalizing world*.  
**Countries:** Europe, Asia and the Pacific, Africa, Arab State, Latin America and the Caribbean.  
Number UNESCO fellowships: 1 (limit of age: no more than 45 years old)
8. Field of research: **Geoen지니어ing**. Project no: **08**. Project title: *Rock Properties Influence on Injection Performance*.  
**Countries:** Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean  
Number UNESCO fellowships: 1 (limit of age: no more than 45 years old)
9. Field of research: **Material Engineering and Ceramic**. Project no: **09**. Project title: *Fine ceramic materials and glazes*.  
**Countries:** Asia and the Pacific, Africa and Arab State  
Number UNESCO fellowships: 1 (limit of age: no more than 40 years old)

10. Field of research: **Material Engineering and Ceramic.** Project no: **10.** Project title: *Influence of some additives on basic parameters of sanitary body or glazes.* **Countries: Asia and the Pacific, Africa and Arab State**  
Number UNESCO fellowships: **1** (limit of age: no more than **40** years old)
11. Field of research: **Material Engineering and Ceramic.** Project no: **11.** Project title: *SHS derived nanolaminates in Ti-Al-C-N system.* **Countries: Asia and the Pacific, Africa and Arab State.**  
Number UNESCO fellowships: **1** (limit of age: no more than **40** years old)
12. Field of research: **Mechanical Engineering Technology.** Project no: **12.** Project title: *Availability problems in transportation systems and devices.* **Countries: Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean.**  
Number UNESCO fellowships: **2** (limit of age: no more than **40** years old)
13. Field of research: **Mechanics.** Project no: **13.** Project title: *Development of control system parallel manipulator based of Assur group of high class.* **Countries: Asia and the Pacific**  
Number UNESCO fellowships: **1** (limit of age: no more than **35** years old)
14. Field of research: **Petrophysics.** Project no: **14.** Project title: *Reservoir geophysics – combining well log data and laboratory data.* **Countries: Asia and the Pacific, Africa, Arab State, Latin America and the Caribbean.**  
Number UNESCO fellowships: **1** (limit of age: no more than **35** years old)
15. Field of research: **Software Engineering.** Project no: **15.** Project title: *Smart methodologies for software development* (limit of age: no more than **35** years old)  
**Countries: Asia and the Pacific, Africa, Arab State, Latin America and the Caribbean.**  
Number UNESCO fellowships: **1.**
16. Field of research: **Solid State Physics.** Project no: **16.** Project title: *Studies Magnetostriction In Stoichiometric and Doped Magnetite Single Crystals.* **Countries: Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean..**  
Number UNESCO fellowships: **1** (limit of age: no more than **40** years old)
17. Field of research: **Transport Engineering.** Project no: **17.** Project title: *Transportation technology systems and devices.* **Countries: Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean.**  
Number UNESCO fellowships: **2** (limit of age: no more than **40** years old)

## B. QUALIFICATIONS REQUIRED

The required qualifications for each field of research (project) are as per the attached annexes to this letter of announcement (see Annex III).

## C. FACILITIES OFFERED BY THE POLISH AUTHORITIES

- (i) Free tuition;
- (ii) Monthly allowance of **1350 PLN** (approximately US \$430) corresponding to the salary of a local junior research fellow. Thus, all living expenses in Poland are to be borne by the fellow with this allowance; and;
- (iii) An installation allowance of **1350 PLN** to be paid upon arrival in Poland.

**No provision to finance or lodge family members is made.**

At the end of the research studies, the beneficiaries will receive a certificate attesting to their attendance at the host institution.

## D. FACILITIES OFFERED BY UNESCO

- (i) **International travel expenses:** (by the most direct, economical route) from the beneficiary's country to and from Poland will be covered by UNESCO under its Regular Programme Budget.
- (ii) **Health insurance for fellowship beneficiaries who are declared medically fit:** UNESCO fellowship holders may be covered by a health insurance policy, taken-out by the Organization for the duration of fellowship. The costs of this health insurance is subscribed to and covered by UNESCO on behalf of awarded fellows.

## E. VISA

Fellows, from countries where Polish Embassies or Consulates exist, will have to obtain their entry visa to the country of study prior to their departure. Fellows, from countries where no such Embassy or Consulate exists, must secure their visa through the nearest Embassy of the Republic of Poland.

UNESCO and the Government of the Republic of Poland provide no allowance to defray passport and visa expenses. Selected beneficiaries will have to secure their own visas themselves.

## F. SUBMISSION OF APPLICATION FILES

**One** candidature should be submitted per invited Member State. **Original applications in duplicate** must be channelled through the National Commission for UNESCO of the candidate's country and communicated to Ali Zaid, Chief, Fellowships Programme Section, by 15 May 2012 at the latest. An advance copy of the application may be sent by fax (33.1) 45.68.55.03 or by e-mail [a.zaid@unesco.org](mailto:a.zaid@unesco.org). Applications should have **imperatively** the following attachments in **DUPLICATE**:

- (i) UNESCO fellowships application forms, **ALL four (4) pages** duly completed in English;
- (ii) Two photographs attached to the applications (4x6 cm);
- (iii) Certified copies (in English) of Bachelor's or Master's Degree obtained; and,
- (iv) UNESCO certificate of language knowledge, duly completed by a relevant authority, if the mother tongue of the candidate is not English.

**Deadline 15 May 2012 at the latest**

### IMPORTANT

It is the National authority's responsibility to ensure that all candidates are duly informed of the above-mentioned conditions prior to the submission of applications.

Files which are incomplete or which are received after the deadline as well as candidatures that do not fulfil the requirements will not be taken into consideration.

**Only the selected candidates will receive a letter through their respective National Commissions for UNESCO.**

All application should be endorsed by the National Commission from the country of the candidate.

# UNESCO/POLAND Co-Sponsored Fellowships Programme Engineering - cycle 2012

## Detailed projects

<b>Project No.</b>	<b>FIELD OF RESEARCH/PROJECT TITLE (number of fellowships)</b>
1	<b>Automation Engineering (2)</b> Transportation system telematics.
2	<b>Computer Science (1)</b> Development of the model of the transformation from ferrite-pearlite to austenite during heating in the continuous annealing of the Advanced High Strength Steels (AHSS).
3	<b>Decision Engineering.(2)</b> Problem base engineering.
4	<b>Drilling (1)</b> Analysis of Hydraulic Fracturing Process.
5	<b>Economic Geology (1)</b> Noble metals in porphyry copper deposits in Chile.
6	<b>Economic Geology (1)</b> Copper and associated mineralization and its lithostratigraphical and tectonic context in the Neoproterozoic succession from selected sites in NW Botswana.
7	<b>Economic Sociology (1)</b> Interrelations between new technologies and social and economic life in globalizing world.
8	<b>Geoengineering (1)</b> Rock Properties Influence on Injection Performance.
9	<b>Material Engineering and Ceramic (1)</b> Fine ceramic materials and glazes
10	<b>Material Engineering and Ceramic (1)</b> Influence of some additives on basic parameters of sanitary body or glazes.
11	<b>Material Engineering and Ceramic (1)</b> SHS derived nanolaminates in Ti-Al-C-N system.
12	<b>Mechanical Engineering Technology (2)</b> Availability problems in transportation systems and devices
13	<b>Mechanics (1)</b> Availability problems in transportation systems and devices
14	<b>Petrophysics (1)</b> Reservoir geophysics – combining well log data and laboratory data.
15	<b>Software Engineering (1)</b> Smart methodologies for software development
16	<b>Solid State Physics (1)</b> Studies Magnetostriction In Stoichiometric and Doped Magnetite Single Crystals.
17	<b>Transport Engineering (2)</b> Transportation technology systems and devices.



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

(in English)

1. Project title:           Transportation system telematics

Field of research:       Automation, Transport Engineering , *mechatronics, mechanical engineering, automation, transport education*

Number of fellowships with free tuition sponsored by UNESCO: 2

2. Name of institution: *AGH University of Science and Technology, Faculty of Mechanical Engineering and Robotics*

.....  
Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name, title and full contact data of project supervisor:

*prof. dr hab. inż. Janusz Szpytko*

Tel.: +48 12 6173103

Fax: +48 12 6173531

E-mail *szpytko@agh.edu.pl*

*www.agh.edu.pl*

4. Project duration:       6 months

Proposed starting date: 1.10. 2012 /exact date to be agreed upon by the selected fellows and host Institution/

Language:               English

Scientific contents:     *individual research programme under supervision of tutor (see next page p.8)*

5. Developing countries (specification): *UNESCO Member States please specify if any Africa, Asia, Pacific Region, Latin America, Carriaribien countries*

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details .....



## UNESCO AGH Fellowships ed. 2012-B in Engineering

### 7. Qualifications required: *for example*

*be proficient in reading and writing in English;*

*be not more than 40 years of age; and be in good health, both physically and mentally;*

*be able to write computer programs for example in C++, ProEngineer, or be familiar with MatlabSimulink, or CA-D/M, FEM, have a general knowledge related to telematic in transportation, or construction testing and measurement*

### 8. Project description (in English):

*project description optional:*

to design and testing in laboratory the intelligent control solutions of selected transportation device, to design and testing the measurement systems of selected exploitation parameters of selected transportation device, to design and testing telematic system of transportation system, to testing and re-design the rail - wheel set laboratory stand

*R&D results:*

improvement in safety and reliability of transportation systems and devices

*other outputs:*

publications, future projects

### 9. Others information:

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

Prof. dr hab. inż. Janusz Szpytko

Place and date: Kraków, January 31, 2012

Dean of the Faculty  
(signature and stamp)

prof. dr hab. inż. Janusz Kowal

AKADEMIA GÓRNICZO-HUTNICZA  
Im. Stanisława Staszica w Krakowie  
WYDZIAŁ INŻYNIERII  
MECHANICZNEJ I ROBOTYKI  
30-059 Kraków, Al. Mickiewicza 30  
tel. (12) 617 30 26, telefax (12) 617 30 54



AGH University of Science and Technology, KRAKOW, POLAND  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering  
Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B  
dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

(in English only)

1. Project title: Development of the model of the transformation from ferrite-pearlite to austenite during heating in the continuous annealing of the Advanced High Strength Steels (AHSS).

Field of research: material/computer science

Number of fellowships with free tuition sponsored by UNESCO: 1

2. Name of institution: AGH University of Science and Technology,  
Faculty of Metals Engineering and Industrial Computer Science.  
Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name and Surname, title and full contact data of project supervisor:

*Prof. dr hab. inż. Maciej Pietrzyk*

Tel.: +48 12 617 29 21

Fax: +48 12 617 29 21

E-mail [maciej.pietrzyk@agh.edu.pl](mailto:maciej.pietrzyk@agh.edu.pl)

[www.isim.agh.edu.pl](http://www.isim.agh.edu.pl)

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 (exact date to be agreed upon by the selected fellows and host Institution)

Language: English

Scientific contents: *individual research programme under supervision of tutor* (see page p.8)

5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific)*  
Asia.

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
The candidate should have a M.Sc degree in material or computer science.

## UNESCO AGH Fellowships ed. 2012-B in Engineering

### 7. Qualifications required:

- be proficient in reading and writing in English;
- be not more than 26 years of age;
- general knowledge in material or computer science;
- interest in numerical modelling of phase transformation with cellular automata method;

### 8. Project description (in English):

*R&D results: project description optional: Phase transformation into austenite during continuous annealing is usually not completed, about 20-30% of ferrite remains in the microstructure. The carbon and alloying elements distribution in the austenite is not uniform. All these aspects have influence on the following phase transformations during cooling and on the resulting microstructure and properties of products. Thus, there is a need for models with advanced predictive capabilities, which can describe microstructure and chemical composition of the AHSSs in the intercritical region during annealing.*

*Goal: Development of the models, which can predict phase composition, morphology of phases and chemical composition during transformation into austenite during heating.*

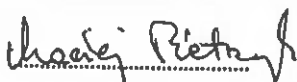
*One of the discrete methods should be used, probably cellular automata. Finite element solution of the diffusion equation with moving boundary (Stefan problem) will be performed, as well.*

*other outputs: Digital pictures of ferrite-austenite microstructure after heating, with information about distribution of concentration of carbon and alloying elements.*

### 9. Others information:


Stamp of the AGH UST Faculty

Project Supervisor  
(signature)



Dean of the Faculty

(signature and stamp)  
R. SZCZEPAN  
ds. badań naukowych i finansów  
Wydział Inżynierii Metali i Informatyki Przemysłowej



dr hab. inż. Tadeusz Telejko  
profesor nadzwyczajny AGH

Place and date: Krakow, 9 lutego, 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

(in English)

1. Project title: *Problem base engineering*  
Field of research: *Decision engineering*  
Number of fellowships with free tuition sponsored by UNESCO: 2

2. Name of institution: *AGH University of Science and Technology,  
UNESCO Chair for Science, Technology and Engineering Education at the AGH University of  
Science and Technology Krakow*  
Full address: *A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland*

3. Name, title and full contact data of project supervisor:  
*prof. dr hab. inż. Janusz Szpytko*  
Tel.: +48 12 617 5109  
Fax: +48 12 617 5108  
E-mail *szpytko@agh.edu.pl*  
*www.agh.edu.pl*

4. Project duration: 6 months  
Proposed starting date: 1.10. 2012 /exact date to be agreed upon by the selected  
fellows and host Institution/  
Language: English  
Scientific contents: *individual research programme under supervision of tutor (see next  
page p.8)*

5. Developing countries (specification): *UNESCO Member States please specify if any  
Africa, Asia, Pacific Region, Latin America, Carriaribien countries*

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details .....

# UNESCO AGH Fellowships ed. 2012-B in Engineering

## 7. Qualifications required: *for example*

*be proficient in reading and writing in English;*

*be not more than 40 years of age; and be in good health, both physically and mentally;*

*be able to use MS Office and drawing programs, be familiar with CAD/ CAE programs, have a general knowledge related to engineering problems*

## 8. Project description (in English):

*Project description optional:*

*Project refers to creating different type of projects (engineering, higher engineering education, R&D types) in various engineering fields with use problem base learning approach and include different aspects, e.g.: finance, human resources management, industrial psychology, information systems, mathematical modeling and optimization, quality control, operations research, safety and health issues, and environmental management.*

*R&D results:*

*Background for future actions creation.*

*other outputs:*

*publications, future projects*

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

Prof. dr hab. inż. Janusz Szpytko

Dean of the Faculty  
(signature and stamp)

Place and date: Krakow, January 31, 2012

Akademia Górniczo - Hutnicza  
im. Stanisława Staszica w Krakowie  
Centrum Międzynarodowej Promocji  
Technologii i Edukacji AGH - UNESCO  
Al. A. Mickiewicza 30, 30-059 Kraków



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

**(In English only)**

1. Project title: Analysis of Hydraulic Fracturing Process

Field of research: Drilling .....

Number of fellowships with free tuition sponsored by UNESCO: 1 .....

2. Name of institution: AGH University of Science and Technology,  
Faculty of Drilling, Oil and Gas

.....  
Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name and Surname , title and full contact data of project supervisor:

*Dariusz Knez Ph.D* .....

Tel.: +48 12 6173784.....

Fax: +48 12 6173784.....

E-mail [knez@agh.edu.pl](mailto:knez@agh.edu.pl).....

WWW [www.agh.edu.pl/en](http://www.agh.edu.pl/en).....

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 (exact date to be agreed upon by the selected fellows and host Institution)

Language: English

Scientific contents: *individual research programme under supervision of tutor* (see page p.8)

5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific)*

*All regions* .....

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details .....

Preferably in earth engineering or computer sciences.

# UNESCO AGH Fellowships ed. 2012-B in Engineering

7. Qualifications required: *for example*

*be proficient in reading and writing in English;*

*be not more than ...45.... years of age; and be in good health, both physically and mentally;.....*

8. Project description (in English):

*R&D results: project description optional:*

*Fellow will take part in research carried out in Drilling and Geoengineering Department. Hydraulic fracturing method is one of the most important stimulation techniques. In low permeability reservoirs conventional completion methods are not cost effective. Because of significant increase in oil and gas prices such difficult to completion reservoirs become more interesting. In past years hydraulic fracturing was applied as most efficient method to increase oil and gas production from formations like tight sandstone and shale. Successful candidate will work with professional software from leading drilling companies. He will also take part in developing new software. The goal of research is to find best range of technological factors influencing hydraulic fracturing performance. Computer skills will be an advantage.*

*other outputs:*

*laboratory research results*

*scientific paper*

9. Others information:

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

*[Handwritten signature]*

Dean of the Faculty  
signature and stamp | Gazu  
Wydział Inżynierii i Gazu

*[Handwritten signature]*  
Dr hab. inż. Stanisław NAGY, prof. n. AGH

Place and date: Krakow, January ...7-th, 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering  
Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B  
dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

**(In English only)**

1. Project title: .....noble metals in porphyry copper deposits in Chile.

Field of research: ...Geology, economic geology.....

Number of fellowships with free tuition sponsored by UNESCO: .....

2. Name of institution: *AGH University of Science and Technology,  
Faculty of ... Geology, Geophysics and Environmental Protection*

.....  
Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name and Surname, title and full contact data of project supervisor:

..... *Prof. PhD eng. Adam Piestrzynski*.....

Tel.: +48 12 ...6172433

Fax: +48 12 .....

E-mail .....piestrz@geol.agh.edu.pl.....

WWW .....

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 (exact date to be agreed upon by the selected fellows and host Institution)

Language: English

Scientific contents: *individual research programme under supervision of tutor (see page p.8)*

5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific)*

*Chile or Peru*.....

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details ..... B.Sc. minimum, much better M.Sc degree



# UNESCO AGH Fellowships ed. 2012-B in Engineering

## 7. Qualifications required: *for example*

*be proficient in reading and writing in English;  
be not more than ... .. 25. years of age; and be in good health, both physically and mentally;  
others please specify if any references from home University, supervisor  
general knowledge in mineral deposits, ore mineralogy.*

## 8. Project description (in English):

*R&D results: project description optional: PGM's are very well documented in both:  
ultramafic Ni-Cu-Fe sulphide deposit and ultramafic chromites related deposits and  
described in many monographs.*

*PGM's in porphyry coppers have been found in Philippines and first time described in  
1994(Piestrzynski et al. Mineralogia Polonica vol.25/2). Recently PGM's were described  
only in a few places e.g. in Bulgaria. Therefore it is still possible to find a new places  
enrich in gold and PGM's. However it also required detailed study of concentrates  
obtained in Cu-Au-porphyry deposit and some selected samples of a hand size collected in  
more silicified sections in the same deposits.*

*other outputs: it is necessary that candidate should first contact AGH supervisor to  
discuss details of the project.*

## 9. Others information: *any skill in an optical ore petrography is recommended*

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

.....  
*Ali*

Dean of the Faculty  
(signature and stamp)

DZIEKAN

.....  
*[Signature]*  
prof. dr hab. inż. Jacek Matyszkiewicz

Place and date: Krakow, ...14.02, 2012



**AGH University of Science and Technology, KRAKOW, POLAND**

**UNESCO Fellowships 2012 in Engineering**

**Naukowa oferta stypendialna UNESCO - AGH 2012 dla młodych naukowców z krajów rozwijających się**

UNESCO - AGH 2012 Project A: promoting human resource capacities in the developing countries through intensive training and to enhance international understanding and friendship among peoples of the world and the people of Poland

1. Project title: .....Copper and associated mineralization and its lithostratigraphical and tectonic context in the Neoproterozoic succession from selected sites in NW Botswana.

Field of research: .....Economic Geology

Number of fellowships with free tuition: .....1.....

2. Name of institution:

AGH University of Science and Technology,

Faculty of Geology, Geophysics and Environmental Protection

Full address: 30 Mickiewicza Ave., PL 30-059 Krakow, Poland

3. Name, title and full contact data of project supervisor: Prof. dr hab. eng. Adam Piestrzynski

Tel.: +48 12 6172433.....

Fax: +48 12 .....

E-mail .piestrz@geol.agh.edu.pl.....

WWW .....

Co-supervisor: Prof. Marek Wendorff

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 /exact date to be agreed upon by the selected fellows and host Institution/

Language: English, .....

Scientific contents: *individual research programme under supervision of tutor (see next page)*

5. Developing countries (specification): ..Botswana.....

.....Namibia.....

6. Academic requirements: Candidates will have a B.Sc. or M.Sc. degree in Geology

7. Qualifications required:

*The successful applicant must: hold a B.Sc. or M.Sc. in Geology with the appropriate courses in Mineralogy, Economic Geology, Metamorphic Petrology an cognate subjects completed and examinations passed with very good marks; must have good command of written and spoken English; be not more than 45 years of age; be in good health, both physical and mental. If English is not the mother tongue of the candidate, a certificate of language proficiency must be provided.*

8. Project description:

*Neoproterozoic sediment-hosted polymetallic deposits of the Kalahari Copperbelt in NW Botswana (the Ngamiland Province) and correlative parts of Namibia are now a target of vigorous exploration and research. They are hosted in a rock succession correlative to the Central African Copperbelt. The aim of this project is to investigate a series of rock samples from NW Botswana to specify the copper mineralisation as well as the lithology and petrology of the host rocks in the context of lithostratigraphy and tectonics. The analysed samples will represent selected sites in NW Botswana. In the course of the project work mineralogical analyses of the provided rock samples will be analysed in the laboratory using a variety of analytical methods. These results, combined with the data on stratigraphic, tectonic and sedimentological position, will be collated and compared with the relevant literature data from other localities in the region. The results will be submitted as a report presented during a seminar. If the results are sufficiently valuable, they will be presented at a conference and in a publication.*

9. Other information:

none

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

*A. D. J. J. J.*

Dean of the Faculty  
(signature and stamp)

*[Signature]*

Place and date: Krakow, February 18, 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: [unesco@agh.edu.pl](mailto:unesco@agh.edu.pl)

**UNESCO AGH Fellowships ed. 2012-B in Engineering  
Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B  
dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

1. Project title:

**INTERRELATIONS BETWEEN NEW TECHNOLOGIES AND SOCIAL  
AND ECONOMIC LIFE IN GLOBALIZING WORLD**

Field of research: **economic sociology and economics**

Number of fellowships with free tuition sponsored by UNESCO: **ONE**

2. Name of institution: *AGH University of Science and Technology,  
Faculty of HUMANITIES*

Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland  
Contact Address: **ul. Gramatyka 8A, 30-071 Krakow, D-13 Hall**

3. Name and Surname , title and full contact data of project supervisor:

*Dr hab. Maria Nawojczyk*

Tel.: +48 12 **617-4380, 617-4345**

Fax: +48 12 **617-4381**

E-mail [maria@list.pl](mailto:maria@list.pl); [maria.nawojczyk@agh.edu.pl](mailto:maria.nawojczyk@agh.edu.pl)

WWW. [wh.agh.edu.pl](http://wh.agh.edu.pl)

4. Project duration: **6 months**

Proposed starting date: **1.10. 2012** (exact date to be agreed upon by the selected fellows and host Institution)

Language: **English**

Scientific contents: *individual research programme under supervision of tutor (see page p.8)*

5. Developing countries (specification): *UNESCO Member States – Eastern Europe Asia, Africa, Latin America, Caribbean and Pacific*

6. Academic requirements: Candidates should have a **MA degree in humanities or social sciences or economics.**

7. Qualifications required:

**Documents conforming the MA degree, be proficient in reading and writing in English. If the language of instruction is not the mother tongue of the candidate, a certificate of language proficiency must be provided; be not more than 45 years of age; and be in good health, both physically and mentally.**

8. Project description (in English):

**INTERRELATIONS BETWEEN NEW TECHNOLOGIES AND SOCIAL AND ECONOMIC LIFE IN GLOBALIZING WORLD**

New technologies are important forces driving the economic and social transformations. They can be theoretically explored from the position of technological determinism or within a model of interrelated processes of influences between technology and its social and economic environment. These processes vary in scope and speed in different regions of the world as well as due to different economic activities and life styles within one society. Varieties of consequences of these interrelations can be observed on the local and global levels: new social divisions, new distribution of power, new centers of economic development, new social and economic activities, and so on.

Participants of the project would be expected to analyze one particular dimension of the processes mentioned above. They would work within the Department of Economic Sociology and Social Communication of the Faculty of Humanities; participate in the projects developed here, present their findings at the departmental seminars and write a report on the social and economic changes in their own countries as observed from the point of view of the topic presented above.

9. Others information:

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

*Kamila Nawojczyk*

Dean of the Faculty  
(signature and stamp)  
DZIEKA WYDZIAŁU

*Zbigniew Pásek*  
dr hab. Zbigniew Pásek, prof. nadzw.

Place and date: Krakow, 6<sup>th</sup> February, 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

**(in English only)**

1. Project title: Rock Properties Influence on Injection Performance

Field of research: Geoen지니어링 .....

Number of fellowships with free tuition sponsored by UNESCO: 1 .....

2. Name of institution: *AGH University of Science and Technology,*  
*Faculty of Drilling, Oil and Gas*

Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name and Surname, title and full contact data of project supervisor:

*Dariusz Knez Ph.D* .....

Tel.: +48 12 6173784.....

Fax: +48 12 6173784.....

E-mail [knez@agh.edu.pl](mailto:knez@agh.edu.pl).....

WWW [www.agh.edu.pl/en](http://www.agh.edu.pl/en).....

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 (exact date to be agreed upon by the selected fellows and host Institution)

Language: English

Scientific contents: *individual research programme under supervision of tutor (see page p.8)*

5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific)*

*All regions* .....

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details .....

Preferably in earth engineering sciences.

# UNESCO AGH Fellowships ed. 2012-B in Engineering

## 7. Qualifications required: for example

*be proficient in reading and writing in English;  
be not more than ...45.... years of age; and be in good health, both physically  
and mentally; general knowledge in rock properties*  
.....

## 8. Project description (in English):

### *R&D results: project description optional:*

*Expanding modern society requires new urban area. From sustainable development point of view the best solution is to make use of existing urban area or new one which is useless for other purposes. In second case quite often ground properties are not suitable for high buildings. Drilling methods are one of the most efficient way of ground modification. Project requires laboratory research on chosen rock properties. Based on laboratory results change of near wellbore region properties will be investigated. To find best solution new mathematical model based on laboratory results is necessary. Successful candidate will work in Drilling and Geoengineering Department laboratory using standard and modern laboratory equipment. Computer skills will be an advantage.*

### *other outputs:*

*laboratory research results  
scientific paper*

## 9. Others information:

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

*[Handwritten Signature]*

Dean of the Faculty  
(signature and stamp)  
Wydział Inżynierii Górniczej i Nafty I Gazu

Dr hab. inż. Stanisław NAGY, prof. w AGH

Place and date: Krakow, January ...7-th, 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicz Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

1. Project title: *Fine ceramic materials and glazes.*

Field of research: *ceramic, material engineering, material engineering education*

Number of fellowships with free tuition sponsored by UNESCO: 1

2. Name of institution:

*AGH University of Science and Technology,  
Faculty of Materials Science and Ceramics; Department of Ceramic Technology and  
Refractory Materials*

.....  
Full address:

*A.Mickiewiczza 30/B6, PL 30-059 Krakow, Poland*

3. Name, title and full contact data of project supervisor:

*dr inż. Janusz Partyka*

Tel. +48 12 6173654

Fax: +48 12 6331593

E-mail partyka@agh.edu.pl

www.agh.edu.pl

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 /exact date to be agreed upon by the selected  
fellows and host Institution/

Language: English

Scientific contents: *individual research programme under supervision of tutor*

5. Developing countries (specification): *UNESCO Member States - optional Asia, Africa*

6. Academic requirements: **Candidates should have a B.Sc. or M.Sc. degree,**  
.....



# UNESCO AGH Fellowships ed. 2012-B in Engineering

## 7. Qualifications required: *for example*

*be proficient in reading and writing in English;  
be not more than 40 years of age; and be in good health, both physically and mentally;  
general knowledge in ceramic engineering*

## 8. Project description (in English):

*R&D results: project description optional:*

to design and testing in laboratory the traditional ceramic materials  
improvements in ceramic processing  
improvements in parameters of materials or glazes  
testing new raw material, for example typical for country of origin  
creating of new materials

*other outputs:*

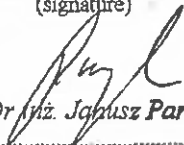
publications, future projects

## 9. Others information:


Stamp of the AGH UST Faculty

AKADEMIA GÓRNICZO-HUTNICZA  
im. Stanisława Staszica w Krakowie  
Wydział Inżynierii Materiałowej i Ceramiki  
31-065 Kraków, ul. A. Mickiewicza 30  
t: 12 617-22-34, 12 617-22-40, fax: 12 633-15-93  
NIP: 6750001923, Regon 000001577

Project Supervisor  
(signature)

  
Dr inż. Jacek Partyka

Dean of the Faculty  
(signature and stamp)

  
Dr hab. inż. Włodzisław Mozgawa

Place and date: Krakow, February; 08 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

**1. Project title:**

Influence of some additives on basic parameters of sanitary body or glazes.

Field of research: ceramic, material engineering, glazes

Number of fellowships with free tuition sponsored by UNESCO: 1

**2. Name of institution:**

*AGH University of Science and Technology,  
Faculty of Materials Science and Ceramic; Department of Ceramic Technology and  
Refractory Materials*

Full address: A.Mickiewicza. 30/B6, PL 30-059 Krakow, Poland

**3. Name and Surname , title and full contact data of project supervisor:**

*Dr inż. Marcin Gajek*

Tel.: +48 12 .617 36 54

Fax: +48 12 .6331593

E-mail mgajek@agh.edu.pl

www.agh.edu.pl

**4. Project duration:** 6 months

**Proposed starting date:** 1.10. 2012 (exact date to be agreed upon by the selected fellows and host Institution)

**Language:** English

**Scientific contents:** individual research programme under supervision of tutor

**5. Developing countries (specification):** UNESCO Member States –optional Asia, Africa

**6. Academic requirements:** Candidates should have a B.Sc. or M.Sc. degree,

7. Qualifications required:

*be proficient in reading and writing in English;  
be not more than 40 years of age; and be in good health, both physically and mentally;  
general knowledge in ceramic engineering*

8. Project description (in English):

*Develop new sanitary body or sanitary glazes;  
- designed new ceramic sanitary body or glazes in laboratory,  
- testing obtained materials  
- redesigned obtained materials  
Create new sanitary body or sanitary glazes.*

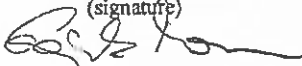
9. Others information:

Stamp of the AGH UST Faculty

AKADEMIA GÓRNICZO-HUTNICZA  
im. Stanisława Staszica w Krakowie  
Wydział Inżynierii Materiałowej i Ceramiki  
30-059 Kraków, al. A. Mickiewicza  
t. 12 617-22-34, 12 617-22-35, fax: 12 637-  
12 8750001923, KRS 000001

Project Supervisor

(signature)



Dr inż. Marcin Gajek.

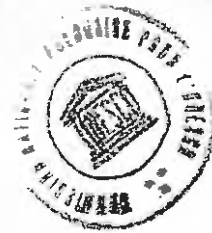
Dean of the Faculty

(signature and stamp)



Dr hab. inż. Włodzimierz Mozgawa

Place and date: Krakow, 02.09.2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
Project Proposal 6 months

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

(In English)

1. Project title: *SHS derived nanolaminates in Ti-Al-C-N system*

Field of research: *ceramic, material engineering*

Number of fellowships with free tuition sponsored by UNESCO: 1

2. Name of institution: *AGH University of Science and Technology,*  
*Faculty of Materials Science and Ceramics*

Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name, title and full contact data of project supervisor:

*dr inż. Leszek Chlubny*

Tel.: +48 12 6172667

Fax: +48 12 6331593

E-mail [chlubny@agh.edu.pl](mailto:chlubny@agh.edu.pl)

[www.agh.edu.pl](http://www.agh.edu.pl)

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 /exact date to be agreed upon by the selected fellows and host Institution/

Language: English

Scientific contents: *individual research programme under supervision of tutor (see next page p.8)*

5. Developing countries (specification): *UNESCO Member States - optional Asia, Africa*

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
in field of Ceramics, Materials Science or Chemical Technology

7. Qualifications required: *for example*  
*be proficient in reading and writing in English;*

# UNESCO AGH Fellowships ed. 2012-B in Engineering

*be not more than 40 years of age; and be in good health, both physically and mentally; general knowledge in ceramic engineering*

## 8. Project description (in English):

*R&D results: project description optional:*

The goal of project will be investigation on obtaining powders of nanolaminate MAX-phase materials by Self-propagating High-temperature Synthesis and testing properties of hot-pressed samples, sintered from obtained powders.

*other outputs:*

publications, future projects

## 9. Others information:

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

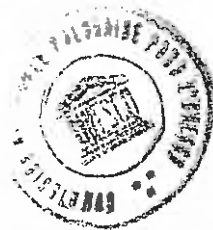
*dr inż. Leszek Chlubny*  
.....

Place and date: Krakow, January 31, 2012

Dean of the Faculty  
(signature and stamp)

*Prof. dr hab. inż. Jan Chłopek*  
.....  
ZIELKA

*prof. dr hab. inż. Jan Chłopek*



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

(In English)

1. Project title: *Availability problems in transportation systems and devices*

Field of research: *Engineering Technology, Transport Engineering, mechatronics, mechanical engineering, automation, safety education*

Number of fellowships with free tuition sponsored by UNESCO: 2

2. Name of institution: *AGH University of Science and Technology,  
Faculty of Mechanical Engineering and Robotics*

.....  
Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name, title and full contact data of project supervisor:

*prof. dr hab. inż. Janusz Szpytko*

Tel.: +48 12 6173103

Fax: +48 12 6173531

E-mail *szpytko@agh.edu.pl*

*www.agh.edu.pl*

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 /exact date to be agreed upon by the selected fellows and host Institution/

Language: English

Scientific contents: *individual research programme under supervision of tutor (see next page p.8)*

5. Developing countries (specification): *UNESCO Member States please specify if any Africa, Asia, Pacific Region, Latin America, Carriaribien countries*

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details .....

# UNESCO AGH Fellowships ed. 2012-B in Engineering

## 7. Qualifications required: *for example*

*be proficient in reading and writing in English;*

*be not more than 40 years of age; and be in good health, both physically and mentally;*

*be able to write computer programs for example or be familiar with CAD/ CAM/ CAE programs, have a general knowledge related to transportation problems, including safety and reliability problems*

## 8. Project description (in English):

*project description optional:*

to design and testing in laboratory the availability of transportation systems and devices, to design the transportation system safety and reliability, to design and testing telematic based system of transportation system

*R&D results:*

improvement in safety and reliability of transportation systems and devices

*other outputs:*

publications, future projects

## 9. Others information:

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

Prof. dr. hab. inż. Janusz Szpytko

Place and date: Krakow, January 31, 2012

Dean of the Faculty  
(signature and stamp)

prof. dr. hab. inż. Janusz Kowal

AKADEMIA GÓRNICZO-HUTNICZA  
im. Stanisława Staszica w Krakowie  
WYDZIAŁ INŻYNIERII  
MECHANICZNEJ I ROBOTYKI  
30-059 Kraków, Al. Mickiewicza 30  
tel (12) 617 30 26, telefax (12) 617 30 99



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

**(In English only)**

1. Project title: Development of control system parallel manipulator based of Assur group of high class

Field of research: Mechanics, Theory of Machines and Mechanisms

Number of fellowships with free tuition sponsored by UNESCO: 1 (one).....

2. Name of institution: *AGH University of Science and Technology,*  
*Faculty of Mechanical Engineering and Robotics, Department of Robotics and Mechatronics ..*

Full address: A. Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name and Surname , title and full contact data of project supervisor:

*Jacek Cieřlik, dr hab. inż., prof. AGH.....*

Tel.: +48 12 617 36-63.....

Fax: +48 12 .617 35-05.....

E-mail *cieslik@agh.edu.p.....*

WWW .....

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 (exact date to be agreed upon by the selected fellows and host Institution)

Language: English

Scientific contents: *individual research programme under supervision of tutor (see page p.8)*

5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific)*

*Asia, Kazakhstan.....*

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details : Candidate should have an experience in theoretical mechanics, theory of machines and mechanisms, mathematical analysis.....



# UNESCO AGH Fellowships ed. 2012-B in Engineering

## 7. Qualifications required:

*be proficient in reading and writing in English and Russian*

*be not more than 35 years of age; and be in good health, both physically and mentally;*

*others: general knowledge in mechanics, physics of solid bodies, mathematical analysis*

## 8. Project description (in English):

**The purpose of work:** development of function and application of management of spatial parallel manipulator package on the base of group of Assura of fourth class with six degrees of freedom by decision of tasks of the dynamic planning and experimental design.

### Tasks:

- Kinematics synthesis and analysis, decision of reverse task of kinematics of spatial parallel manipulator on the base of group of Assura of fourth class with six DOF.
- Dynamic analysis and synthesis of spatial parallel manipulator on the base of group of Assura of fourth class with six degrees of freedom.
- Development of operating model of parallel manipulator on the base of group of Assura of fourth class with six degrees of freedom.
- Development of function of programmatic management of parallel manipulator on the base of group of Assura of fourth class with six degrees of freedom.
- Development of application of management a parallel manipulator package.
- Leadthrough of imitation experimental design of parallel manipulator on PEVM and by the model of manipulator.

### The novelty of work is to obtain:

- Method of kinematics and dynamic synthesis of spatial parallel manipulator on the base of mechanisms of high class.
- Method of synthesis of function management a spatial manipulator on a base MVK.
- Application of spatial parallel manipulator package on the base of mechanisms of

## 9. Other information:

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

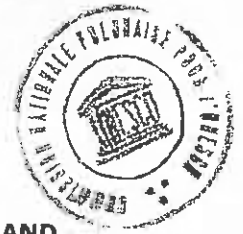
*Janusz Kowal*

Place and date: Krakow, 08.02.2012

Dean of the Faculty  
(signature and stamp)

*Janusz Kowal*  
Wydziiał Inżynierii  
Mechanicznej i Robotyki

Prof. dr hab. inż. Janusz Kowal



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

**(In English only)**

1. Project title: Reservoir geophysics – combining well log data and laboratory data  
Field of research: petrophysics & well logging  
Number of fellowships with free tuition sponsored by UNESCO: 1

2. Name of institution: *AGH University of Science and Technology,*  
*Faculty of Geology Geophysics and Environmental Protection, Department of Geophysics*

Full address: A. Mickiewicz Av. 30, PL 30-059 Krakow, Poland

3. Name and Surname, title and full contact data of project supervisor:

*Prof dr Jadwiga Jarzyna*

Tel.: +48 12 617 24 21

Fax: +48 12 6332936

E-mail jarzyna@agh.edu.pl

WWW .....

4. Project duration: 6 months  
Proposed starting date: 1.10. 2012 (exact date to be agreed upon by the selected fellows and host Institution)  
Language: English  
Scientific contents: *individual research programme under supervision of tutor*

5. Developing countries (specification): *UNESCO Member States - Asia, Africa, Latin America, Caribbean and Pacific*

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree in GEOPHYSICS, APPLIED GEOPHYSICS, PETROLEUM GEOLOGY, GEOLOGY

7. Qualifications required:

*be proficient in reading and writing in English;  
be not more than 35 years of age; and be in good health, both physically and mentally;  
others: ABLÉ TO WORK IN TEAM  
general knowledge in EARTH SCIENCES, MATHEMATICS, PHYSICS*

8. Project description (in English):

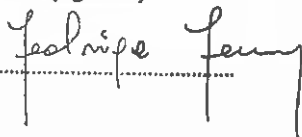
*Project comprises methods of integrating of various geophysical and geological and petrophysical (lab) data to improve hydrocarbon and water prospection. Well logging and seismics will be the most important methods. Professional Computer systems licensed in AGH UST will be used for processing and interpretation of data. Attention will be focused on including the improved relations between various parameters into modelling of media flow in pore space. The modern Nuclear Magnetic Resonance lab measurements will be included. Preferred results of NMR logging. Seismic attributes will be combined with well log data. Project will be realised on Polish and foreign country data.*

9. Others information:


Stamp of the AGH UST Faculty

Akademia Górniczo-Hutnicza  
im. Stanisława Staszica w Krakowie  
WYDZIAŁ GEODEZJI, GEOFIZYKI  
I OCHRONY ŚRODOWISKA  
30-059 Kraków, Al. Puckiewiczza 30  
tel. (12) 617-33-39, fax (012) 633-29-36  
NIP 675 000 19 23  
(1)

Project Supervisor  
(signature)



Dean of the Faculty  
(signature and stamp)

DZIEKAN  
  
prof. dr hab. inż. Jacek Matyszkiewicz

Place and date: Krakow, 13.02. 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND

A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland

E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

**(in English only)**

1. Project title: Smart methodologies for software development

Field of research: Software Engineering

Number of fellowships with free tuition sponsored by UNESCO: .....

2. Name of institution: *AGH University of Science and Technology,*

*Faculty of Electrical Engineering, Automatics, Computer Science and Electronics.*

Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name and Surname, title and full contact data of project supervisor:

*Prof. dr hab. Tomasz Szumac*

Tel.: +48 12 888 20 07

Fax: +48 12 423 35 70

E-mail [tsz@agh.edu.pl](mailto:tsz@agh.edu.pl)

WWW: [www.agh.edu.pl](http://www.agh.edu.pl)

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 (exact date to be agreed upon by the selected fellows and host Institution)

Language: English

Scientific contents: *individual research programme under supervision of tutor (see page p.8)*

5. Developing countries (specification): *UNESCO Member States - (Asia, Africa, Latin America, Caribbean and Pacific)*

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree in Computer Science

7. Qualifications required:

# UNESCO AGH Fellowships ed. 2012-B in Engineering

*be proficient in reading and writing in English;  
be not more than 35. years of age; and be in good health, both physically and mentally;  
good skills in computer programming, basic knowledge in software engineering, good  
background in mathematics*

## 8. Project description (in English):

*project description optional:*

The aim of the project is to incorporate verification methods to support development of correct software for specific systems. The concept is based on introduction of parallel thread in which systematic verification of developed software artifacts will be carried out.

*R&D results:*

1. Modifications of existing software development methodology.
2. Software modules supporting the verification.

*other outputs:*

1. Cooperation with researches working in this area.
2. Improvement of knowledge on Polish culture and history.

## 9. Others information:

Stamp of the AGH UST Faculty

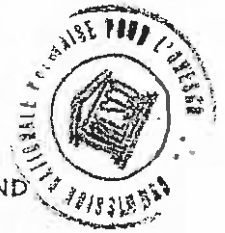
Project Supervisor  
(signature)



Dean of the Faculty  
(signature and stamp)

AKADEMIA GÓRNICZO-HUTNICZA  
im. Stanisława Staszica  
30-059 Kraków, ul. M. Skłodowska 30

Place and date: Krakow, February 9, 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering  
Project Proposal 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B  
dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

(in English)

1. Project title: *Studies Magnetostriction in Stoichiometric and Doped Magnetite Single Crystals*

Field of research: *Solid State Physics*

Number of fellowships with free tuition sponsored by UNESCO: 1

2. Name of institution: *AGH University of Science and Technology,  
Faculty of Physics and Applied Computer Science*

Full address: *A. Mickiewicza Av. 30, PL 30-059 Krakow, Poland*

3. Name, title and full contact data of project supervisor:

*prof. dr hab. inż. Andrzej Kozłowski, prof. dr hab. inż. Zbigniew Kakol*

Tel.: +48 12 617 2006

E-mail *kozlow@agh.edu.pl, kakol@agh.edu.pl*

*www.agh.edu.pl*

4. Project duration: 6 months

Proposed starting date: 1.10.2012 /exact date to be agreed upon by the selected fellows and host Institution/

Language: English

Scientific contents: *individual research programme under supervision of tutor (see next page p.8)*

5. Developing countries (specification): *UNESCO Member States please specify if any Africa, Asia, Latin America countries*

6. Academic requirements: *Candidates should have a B.Sc. or M.Sc. degree in Physics or Technical Physics,*

7. Qualifications required: *be proficient in reading and writing in English;*

# UNESCO AGH Fellowships ed. 2012-B in Engineering

*he not more than 40 years of age; and be in good health, both physically and mentally;*

***project description optional:***

The project is to study magnetostriction in magnetite-based single crystalline materials in order to see how large the interaction of magnetic moment with the lattice is and if magnetism can participate in the interactions leading to the Verwey phase transformation at  $T_V = 120\text{K}$ . Crystal lattice dynamics was already shown to influence this transition. In case the strong spin-lattice coupling is present then any change in magnetism of magnetite could affect crystal structure, i.e., ultimately, the transition. The possible finding of this effect would constitute a real breakthrough in the science of magnetite since the most common opinion is that the magnetic degrees of freedom do not participate in the interactions leading to the transition. In addition to that problem, the results of magnetostriction measurements will help to better understand our recent measurements of magnetic axis switching phenomenon.

***R&D results:***

As above

***other outputs:***

project study

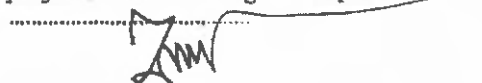
## 9. Others information:

Stamp of the AGH UST Faculty

**Project Supervisor**

(signature)

*prof. dr hab. inż. Zbigniew Kąkol*



*prof. dr hab. inż. Zbigniew Kąkol, v-ce Rector for Education AGH UST*

**Dean of the Faculty**

(signature and stamp)

AKADEMIA GÓRNICZO-HUTNICZA

im. Stanisława Staszica

30-059 Kraków, al. A. Mickiewicza 30

tel./fax (012) 633-26-49

tel. (012) 617-20-06, 617-39-00

Place and date: Krakow, February 28, 2012



**AGH University of Science and Technology, KRAKOW, POLAND**  
UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION AT THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
KRAKOW, POLAND  
A. Mickiewicza Ave 30, PL 30-059 Krakow, Poland  
E-mail: unesco@agh.edu.pl

**UNESCO AGH Fellowships ed. 2012-B in Engineering**  
**Project Proposal 6 months**

**Naukowa oferta stypendialna UNESCO - AGH 2012 B**  
**dla młodych naukowców z krajów rozwijających**

UNESCO - AGH 2012 Project B: promoting human resource capacities in the developing countries through intensive training and to enhancing international understanding and friendship among peoples of the world and the people of Poland

(in English)

1. Project title: *Transportation technology systems and devices*

Field of research: *Transport engineering, transportation, mechanical engineering, automation, transport and logistic*

Number of fellowships with free tuition sponsored by UNESCO: 2

2. Name of institution: *AGH University of Science and Technology, Faculty of Mechanical Engineering and Robotics*

Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name, title and full contact data of project supervisor:

*prof. dr hab. inż. Janusz Szpytko*

Tel.: +48 12 6173103

Fax: +48 12 6173531

E-mail [szpytko@agh.edu.pl](mailto:szpytko@agh.edu.pl)

[www.agh.edu.pl](http://www.agh.edu.pl)

4. Project duration: 6 months

Proposed starting date: 1.10. 2012 /exact date to be agreed upon by the selected fellows and host Institution/

Language: English

Scientific contents: *individual research programme under supervision of tutor (see next page p.8)*

5. Developing countries (specification): *UNESCO Member States please specify if any Africa, Asia, Pacific Region, Carriaribien countries*

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details .....



# UNESCO AGH Fellowships ed. 2012-B in Engineering

## 7. Qualifications required: *for example*

*be proficient in reading and writing in English;*

*be not more than 40 years of age; and be in good health, both physically and mentally;*

*be able to write computer programs for example or be familiar with CAD/ CAM/ CAE programs, have a general knowledge related to transportation problems, including safety and reliability problems*

## 8. Project description (in English):

*project description optional:*

to design and testing in laboratory the availability of transportation systems and devices, to design the transportation system safety and reliability, to design and testing telematic based system of transportation system

*R&D results:*

improvement in safety and reliability of transportation systems and devices

*other outputs:*

publications, future projects

## 9. Others information:

Stamp of the AGH UST Faculty

Project Supervisor  
(signature)

Prof. dr hab. Inż. Janusz Szpytko

Place and date: Krakow, January ...31, 2012

Dean of the Faculty  
(signature and stamp)

prof. dr hab. inż. Janusz Kowal

AKADEMIA GÓRNICZO-HUTNICZA  
Im. Stanisława Staszica w Krakowie  
WYDZIAŁ INŻYNIERII  
MECHANICZNEJ I ROBOTYKI  
30-059 Kraków, Al. Mickiewicza 30  
tel (12) 617 30 36, telefax (12) 617 30 37



7, place de Fontenoy, 75352 Paris 07 SP  
 telephone: (33.1) 45.68.10.00  
 telex: 204461 Paris  
 270602 Paris  
 telefax UNESCO: (33.1) 45.66.94.29

## APPLICATION FOR FELLOWSHIP

under the  
UNESCO FELLOWSHIPS PROGRAMME

**Instructions:** The application form should be submitted by the appropriate governmental body and each part should be answered completely and accurately. *The application should be submitted in three copies.* The information requested should be either typed or written in ink in block capitals. Where additional space is needed, a separate sheet should be used and attached in three copies.

### A. Official presentation

The Government of ..... presents herewith  
 the candidature of ..... for a UNESCO fellowship  
 in the field of .....  
 for a duration of ..... to begin .....  
 under Programme and/or Project .....

---

The undersigned certifies that it is the Government's intention to have organized a programme of study such that will permit the candidate to increase his contribution to the development of his country in the future.

If a fellowship is granted, the Government will:

(a) provide the necessary assistance to the fellow for departure to begin the study programme;

(b) assist the fellow in meeting personal and family responsibilities during the period of his fellowship by maintaining, if necessary, continuation of the whole or part of his present remuneration;

(c) facilitate employment of the fellow in the assignment mentioned in this application upon completion of the fellowship.

It is certified that information contained herein is complete and accurate.

PRESENTED FOR: BY:

(seal) ..... Name and title of responsible officer  
 .....  
 .....  
 Date Signature

### B. Background data concerning the candidate

Family name (surname) .....		First and middle names .....		Nationality .....	Occupation .....
Permanent address .....				Telephone.....	Please attach photo here (Optional)
Mailing address (if different from above).....				E-mail.....	
Mailing address (if different from above).....				E-mail.....	
Date of birth day month year .....	Country and place of birth .....			Sex .....	
Marital status .....	Full name of spouse .....	Number and age of children .....		Name and address of person to notify in case of accident .....	

## Education

Name, place and country of educational establishments	Years attended		Degrees, diplomas: Indicate main subjects	Date obtained
	from	to		
Secondary, technical, etc. ..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....
Post-secondary, university, or equivalent ..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....

**IMPORTANT:** This application is not considered complete unless accompanied by certified copies of diplomas received and academic transcripts of courses followed and grades or marks obtained

## Other studies

Mention any other studies undertaken, including training/refresher courses

## Fellowships and scholarships

Which of the above studies were undertaken with a fellowship or scholarship? Mention the sponsor of the grant

## Visits abroad

List any significant visits abroad not mentioned above

## Publications and research

List any significant publications (including publisher and date of publication) and any major research projects undertaken

## Languages

Mother tongue:

Other languages	Read		Understand (spoken)		Speak		Write	
	Easily	Not easily	Easily	Not easily	Fluently	Not fluently	Easily	Not easily
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....

The UNESCO certificate of language knowledge should be completed and attached to this application

## References

List three persons, not related to the candidate, who can provide information on his/her qualifications. These persons should normally be teachers or supervisors acquainted with the candidate's previous academic work

Full name	Title and address
.....	.....
.....	.....
.....	.....



## Details of proposed studies

(If additional space is needed, separate sheets should be attached)

Give precise details of studies to be undertaken

Give realistic budget estimates for the fellowship requested (return travel, monthly allowance, tuition fees, etc.)

## Expected results and future assignment

Indicate how it is envisaged to make the best use of the results achieved and specify what position will be taken up at the end of the fellowship with a description of future responsibilities

## Candidate's statement

If UNESCO grants me a fellowship I agree to take up after my period of study the position to be assigned to me as described above. I certify the information I have provided is complete and accurate

---

Candidate's signature



7, place de Fontenoy, 75352 Paris 07 SP  
telephone: (33.1) 45.68.10.00

APPLICATION FOR FELLOWSHIP

**CERTIFICATE OF LANGUAGE KNOWLEDGE**

Name of candidate .....	Language .....
.....	.....

Address of candidate .....

.....

(1) ABILITY TO UNDERSTAND

- (a) Understands without difficulty when addressed at normal rate.....
- (b) Understands almost everything, if addressed slowly and carefully.....
- (c) Requires frequent repetition and/or translation of words and phrases.....
- (d) Does not understand spoken language.....

(2) ABILITY TO SPEAK

- (a) Speaks fluently and accurately and is easily intelligible.....
- (b) Speaks intelligibly, but is not fluent or altogether accurate.....
- (c) Speaks haltingly, and is often at a loss for words and phrases.....

(3) ABILITY TO WRITE

- (a) Writes with ease and accurately.....
- (b) Writes slowly and/or with only a moderate degree of accuracy.....
- (c) Writes with difficulty and makes frequent mistakes.....

(4) READING ABILITY AND COMPREHENSION

- (a) Reads fluently, with full comprehension.....
- (b) Reads slowly, but understands almost everything he reads.....
- (c) Reads with difficulty, and only with frequent recourse to the dictionary.....
- (d) Cannot read.....

(5) TECHNICAL LANGUAGE

Certain fellowships require a particular knowledge of specialized or technical language. In such cases, please evaluate candidate's ability with reference to paras. 1, 2, and 4 above.

- (6) Please indicate any further facts about candidate's language knowledge which may be of value in the development of his programme:

LANGUAGE TEST HAS BEEN MADE BY ..... Address: .....

Name: .....

Title: .....

..... Date: .....

COMMENTS: .....

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