



**Section du Programme de bourses**  
**Secteur des Relations extérieures et l'information du public**

United Nations  
Educational, Scientific and  
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  
Объединенных Наций по  
вопросам образования,  
науки и культуры

منظمة الأمم المتحدة  
للتربية 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

Aux: Commissions nationales pour  
l'UNESCO  
des Etats membres invités  
(cf. Annexe I)

Réf. : ERI/NCS/FLP/LZF/13.184

7 mai 2013

Objet : Programme des Bourses Coparrainées UNESCO/POLOGNE en Ingénierie,  
Cycle 2013

Madame/Monsieur,

J'ai le plaisir de vous informer que dans le cadre du programme des bourses coparrainées de l'UNESCO/Pologne cycle 2012 en Ingénierie, la Commission nationale polonaise pour l'UNESCO et la Chaire UNESCO pour la Science, la Technologie et l'Enseignement de l'Ingénierie à AGH, l'Université des Sciences et Technologies (Cracovie), offrent **trente-deux (32)** bourses de recherche d'une durée de **six (6)** mois débutant le 1<sup>er</sup> octobre 2013, en Pologne, au profit de certains Etats membres (cf. Annexe I). Les bénéficiaires de cette bourse auront l'opportunité d'entreprendre un programme de recherche dans le domaine **des Sciences, des Technologies et de l'Ingénierie**.

Les annexes jointes donnent des renseignements précis sur le domaine d'études, les qualifications requises, les privilèges offerts, les règles et conditions d'attribution de ces bourses et la procédure à suivre pour la soumission des dossiers de candidature.

Ce programme est offert par voie de concours et seuls les candidats réunissant les qualifications nécessaires et répondant aux critères stipulés dans les annexes, auront la chance d'être sélectionnés. Les candidatures doivent être adressées à: M. Ali Zaid, Chef, Section des bourses, UNESCO, 7, place de Fontenoy – 75352 Paris 07 SP (France) ; vous pouvez envoyer une copie par courriel : [a.zaid@unesco.org](mailto:a.zaid@unesco.org); ou [l.zas-friz@unesco.org](mailto:l.zas-friz@unesco.org) d'ici le **21 juin 2013 au plus tard**.

Veuillez agréer, Madame/Monsieur, l'expression de mes sentiments distingués.

Eric FALT

cc: Délégations permanentes auprès de l'UNESCO des Etats membres invités  
Commission nationale polonaise pour l'UNESCO  
Délégation permanente de la République de Pologne auprès de l'UNESCO  
AGH Université des Sciences et Technologies (AGH - UST)  
Bureaux régionaux des pays concernés

Pièce jointes:

Annexe I (Etats Membres invités et qualifications requises par domaine d'études - Disponible seulement en anglais)

Annexe II (Critères et conditions)

Annexe III (Descriptif des 20 courses proposées. Disponible seulement en anglais)

Formulaire UNESCO de demande de bourse seulement en anglais

Certificat de connaissance linguistique seulement en anglais

## UNESCO/POLAND CO-SPONSORED FELLOWSHIPS PROGRAMME 2013

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

Project No.	FIELD OF RESEARCH/PROJECT TITLE (number of fellowships)	INVITED MEMBER STATES PER REGION	LIMIT OF AGE	ACADEMIC REQUIREMENT
1	<b>Automation, Transport Engineering, mechatronics, mechanical. (2)</b> <i>Transportation system telematics</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>40</b> years of age	B.Sc or M.Sc degree
2	<b>Decision Engineering. (2)</b> <i>Problem base engineering.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>40</b> years of age	B.Sc or M.Sc degree
3	<b>Drilling. (2)</b> <i>Analysis of Hydraulic Fracturing Process.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>45</b> years of age	B.Sc or M.Sc degree
4	<b>Drilling. (2)</b> <i>Drilling and Hydraulic Fracturing Simulation</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>45</b> years of age	B.Sc or M.Sc degree
5	<b>Economic Sociology (1)</b> <i>Interrelations between new technologies and social and economic life in globalizing world</i>	Asia and the Pacific, Africa, Arab State, Europe, Latin America and the Caribbean	no more than <b>45</b> years of age	MA degree in humanities or social sciences or economics
6	<b>Engineering Technology, Transport Engineering, mechatronics (2)</b> <i>Availability problems in transportation systems and devices.</i>	Asia and the Pacific, Africa, Arab State, Latin America and the Caribbean	no more than <b>40</b> years of age	B.Sc or M.Sc degree
7	<b>Environmental Protection Engineering and Biotechnology (2)</b> <i>Laser, Biotechnology as Innovative Method of Adaptation of Selected Plans to Common Pollutants of the Natural Environment as New Tool for Creation Green Jobs.</i>	Asia and the Pacific, Africa, Arab State	no more than <b>39</b> years of age	B.Sc or M.Sc degree
8	<b>Geoengineering (2)</b> <i>Drilling Parameters Influence on Injection Performance.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>45</b> years of age	B.Sc or M.Sc degree
9	<b>Geology and Mining (1)</b> <i>Optimising Borehole Heat Exchangers Systems.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>30</b> years of age	B.Sc or M.Sc degree
10	<b>Geotourism (2)</b> <i>Assessment of geotouristic values of selected geological objects.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>40</b> years of age	B.Sc or M.Sc degree
11	<b>Materials science and ceramics (1)</b> <i>Nanolaminate materials in Ti-Al-C-N system obtained by SHS method.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean.	no more than <b>35</b> years of age	B.Sc or M.Sc degree
12	<b>Ceramic, material engineering, glazes (1)</b> <i>Influence of some additives on basic parameters of sanitary body or glazes.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>35</b> years of age	B.Sc or M.Sc degree
13	<b>Mechanical Engineering (1)</b> <i>Rope based transport operation.</i>	Latin America and the Caribbean	no more than <b>45</b> years of age	B.Sc or M.Sc degree

Project No.	FIELD OF RESEARCH/PROJECT TITLE (number of fellowships)	INVITED MEMBER STATES PER REGION	LIMIT OF AGE	ACADEMIC REQUIREMENT
14	Mechanics, Theory of Machines and Mechanisms, Robotics (1) <i>Development of control system parallel manipulator based of Assur group of high class.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>35</b> years of age	B.Sc or M.Sc degree
15	Mining and Geoengineering (2) <i>Mining and Geology, Environmental Engineering</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>40</b> years of age	B.Sc or M.Sc degree
16	Petrophysics & well logging & reservoir geophysics (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 <b>35</b> years of age	B.Sc or M.Sc degree
17	Reservoir engineering of unconventional resources (2) <i>Optimization of multistage fracking process in horizontal gas wells in tight and shale reservoirs.</i>	(Armenia, Azerbaijan, Brunei Darussalam, Georgia, Ghana, Kazakhstan, Malaysia Philippines, Ukraine, Uzbekistan )	no more than <b>40</b> years of age	B.Sc or M.Sc degree
18	Software Engineering (2) <i>Smart methodologies for development of software for embedded systems.</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>40</b> years of age	B.Sc or M.Sc degree
19	Technical physics (1) <i>Axis Switching impact o the selected physical properties of magnetite exhibiting first and second order Verwey transition</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>40</b> years of age	B.Sc or M.Sc degree
20	Transport Engineering transportation, mechanical engineering, automation, transport and logistic (2) <i>Transportation technology systems and devices</i>	Africa, Arab State, Asia and the Pacific, Latin America and the Caribbean	no more than <b>40</b> years of age	B.Sc or M.Sc degree
	Total fellowships: 32			

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

## 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

(36 Member States and 2 Associated Members)

- Afghanistan
- Bangladesh
- Bhutan
- Brunei Darussalam
- 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

- 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).

## PROGRAMME DES BOURSES COPARRAINÉES UNESCO/POLOGNE 2013

Afin de promouvoir les compétences des ressources humaines des pays en développement, et de favoriser la compréhension et l'amitié entre les nations et le peuple polonais, la Commission nationale polonaise pour l'UNESCO et AGH, l'Université des Sciences et Technologies Chaire UNESCO pour la Science, la Technologie et l'Enseignement de l'Ingénierie à l'Université des Sciences et Technologies (Cracovie), met à la disposition de l'UNESCO **trente-deux (32)** bourses de recherche de **six(6)** mois chacune qui débiteront le 1<sup>er</sup> octobre 2013. Ces bourses s'adressent aux ressortissants des Etats membres répertoriés en Annexe I. Les bénéficiaires de cette bourse auront l'opportunité d'entreprendre un programme de recherche dans le domaine des **Sciences, des Technologies et de l'Ingénierie**.

Les critères et conditions de ces bourses sont indiqués ci-dessous. La sélection des bénéficiaires revient aux autorités polonaises.

### A. DOMAINE DE RECHERCHE

Les domaines de recherche (disponibles seulement en anglais) sont indiqués ci-dessous (cf. Annexe III):

### B. QUALIFICATIONS REQUISES

Merci de vous reporter à l'Annexe III pour un descriptif détaillé des qualifications requises pour chaque programme (ces qualifications variant d'un domaine de recherche à l'autre).

1. Domain de recherche: Automation, **Transport Engineering, mechatronics, mechanical**. Projet no: **01**. Titre du projet: *Transportation system telematics*.  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Amérique Latine et les Caraïbes**  
Nombre des bourses UNESCO : **2**. (limite d'âge pas plus de **40 ans**)
2. Domain de recherche: **Decision Engineering**. Projet no: **02**. Titre du projet: *Problem base engineering*.  
**Pays : Afrique, Etat Arabe, Asie et Pacifique, Amérique Latine et les Caraïbes**  
Nombre des bourses UNESCO : **2**. (limite d'âge pas plus de **40 ans**)
3. Domain de recherche: **Drilling..** Projet no: **03**. Titre du projet: *Analysis of Hydraulic Fracturing Process*.  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Latine Amérique et les Caraïbes**.  
Nombre des bourses UNESCO : **2**. (limite d'âge pas plus de **45 ans**)
4. Domain de recherche: **Drilling**. Projet no: **04**. Titre du projet: *Drilling and Hydraulic Fracturing Simulation*.  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Latine Amérique et les Caraïbes**.  
Nombre des bourses UNESCO : **2** (limite d'âge pas plus de **45 ans**)
5. Domain de recherche: **Economic Sociology**. Projet no: **05**. Titre du projet: *Interrelations between new technologies and social and economic life in globalizing world*  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Europe et Latine Amérique et les Caraïbes**  
Nombre des bourses UNESCO : **1** (limite d'âge pas plus de **45 ans**)
6. Domain de recherche: **Engineering Technology, Transport Engineering, mechatronics**. Projet no: **06**. Titre du projet: *Availability problems in transportation systems and devices*.  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Latine Amérique et le Caraïbes**.  
Nombre des bourses UNESCO : **2** (limite d'âge pas plus de **40 ans**)
7. Domain de recherche: **Environmental Protection Engineering and Biotechnology**. Projet no: **07**. Titre du projet: *Laser, Biotechnology as Innovative Method of Adaptation of Selected Plans to Common Pollutants of the Natural Environment as New Tool for Creation Green Jobs*.  
**Pays: Asie et Pacifique, Afrique, Etat Arabe**.  
Nombre des bourses UNESCO : **2** (limite d'âge pas plus de **39 ans**)
8. Domain de recherche: **Geoengineering**. Projet no: **08**. Titre du projet: *Drilling Parameters Influence on Injection Performance*.  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Latine Amérique et les Caraïbes**  
Nombre des bourses UNESCO : **2** (limite d'âge pas plus de **45 ans**)

9. Domain de recherche: **Geology and Mining**. Projet no: **09**. Titre du projet: *Optimising Borehole Heat Exchangers Systems*.  
**Pays: Asie et Pacifique, Afrique, Etat Arabe et Amérique Latine et le Caraïbes**  
Nombre des bourses UNESCO : **1** (limite d'âge pas plus de **30** ans)
10. Domain de recherche: **Geotourism**. Projet no: **10**. Titre du projet: *Assessment of geotouristic values of selected geological objects*.  
**Pays: Asie et Pacifique, Afrique, Etat Arabe et Amérique Latine et le Caraïbes**  
Nombre UNESCO fellowships: **2** (limite d'âge pas plus de **40** ans)
11. Domain de recherche: **Materials science and ceramics**. Projet no: **11**. Titre du projet: *Nanolaminated materials in Ti-Al-C-N system obtained by SHS method*.  
**Pays: Asie et Pacifique, Afrique, Etat Arabe et Amérique Latine et le Caraïbes**  
Nombre des bourses UNESCO : **1** (limite d'âge pas plus de **35** ans)
12. Domain de recherche: **Ceramic, material engineering, glazes**. Projet no: **12**.  
Titre du projet: *Influence of some additives on basic parameters of sanitary body or glazes*.  
**Pays : Asie et Pacifique, Afrique et Etat Arabe et Amérique Latine et le Caraïbes.**  
Nombre de bourses UNESCO: **1** (limite d'âge pas plus de **35** ans)
13. Domain de recherche: **Mechanical Engineering**. Projet no: **13**. Titre du projet: *Rope based transport operation*.  
**Pays: Amérique Latine et le Caraïbes**  
Nombre des bourses UNESCO : **1** (limite d'âge pas plus de **45** ans)
14. Domain de recherche: **Mechanics, Theory of Machines and Mechanisms, Robotics**. Projet no: **14**. Titre du projet: *Development of control system parallel manipulator based of Assur group of high class*.  
**Pays: Asie et Pacifique, Afrique, Etat Arabe, Amérique Latine et les Caraïbes.**  
Nombre des bourses UNESCO : **1** (limite d'âge pas plus de **35** ans)
15. Domain de recherche: **Mining and Geoenvironmental Engineering**. Projet no: **15**. Titre du projet : *Mining and Geology, Environmental Engineering* (limite d'âge pas plus de **40** ans)  
**Pays: Asie et Pacifique, Afrique, Etat Arabe, Amérique Latine et les Caraïbes.**  
Nombre des bourses UNESCO : **2**.
16. Domain de recherche: **Petrophysics & well logging & reservoir geophysics**. Projet no: **16**. Titre du projet: *Reservoir geophysics-combining well log data and laboratory data*.  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Amérique Latine et les Caraïbes.**  
Nombre des bourses UNESCO : **1** (limite d'âge pas plus de **35** ans)
17. Domain de recherche: **Reservoir engineering of unconventional resources**. Projet no: **17**. Titre du projet: *Optimization of multistage fracturing process in horizontal gas wells in tight and shale reservoirs..*  
**Pays: Arménie, Azerbaïdjan, Brunei Darussalam, Géorgie, Ghana, Kazakhstan, Malaisie, Philippines, Ukraine, Uzbekistan.**  
Nombre des bourses UNESCO : **2** (limite d'âge pas plus de **40** ans)
18. Domain de recherche: **Software Engineering**. Projet no: **18**. Titre du projet : *Smart methodologies for development of software for embedded systems* (limite d'âge pas plus de **40** ans)  
**Pays: Asie et Pacifique, Afrique, Etat Arabe, Amérique Latine et les Caraïbes.**  
Nombre des bourses UNESCO : **2**.
19. Domain de recherche: **Technical physics**. Projet no: **19**. Titre du projet: *Axis Switching impact on the selected physical properties of magnetite exhibiting first and second order Verwey transition*.  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Amérique Latine et les Caraïbes.**  
Nombre des bourses UNESCO : **1** (limite d'âge pas plus de **40** ans)
20. Domain de recherche: **Transport Engineering transportation, mechanical engineering, automation, transport and logistic** Projet no: **20**. Titre du projet: *Transportation technology systems and devices*  
**Pays: Afrique, Etat Arabe, Asie et Pacifique, Amérique Latine et les Caraïbes.**  
Nombre des bourses UNESCO : **2** (limite d'âge pas plus de **40** ans)

### C. MOYENS OFFERTS PAR LES AUTORITES POLONAISES

- (i) Frais de scolarité gratuits ;

- (ii) Allocation mensuelle de **1350 PLN** (450 \$US approximativement) pour permettre au boursier de régler entièrement toutes les dépenses liées à son séjour en Pologne (cette allocation correspond au salaire local d'un jeune chercheur); et,
- (iii) Allocation d'installation de **1350 PLN** versée à l'arrivée en Pologne.

**Aucune allocation n'est prévue pour les membres de la famille du boursier.**

A la fin de la bourse, l'Université ou l'établissement d'accueil délivrera aux boursiers un certificat attestant leurs études ou travaux de recherches.

#### **D. MOYENS OFFERTS PAR L'UNESCO**

- (i) **Billet aller-retour à destination de la Pologne** (au tarif le plus économique) à la charge de l'UNESCO au titre de son Programme ordinaire; et
- (ii) **Couverture médicale** : L'UNESCO souscrit une police d'assurance pour ses boursiers sélectionnés, pendant la durée de la bourse et règle directement les frais d'affiliation à l'assureur du système des Nations Unies, sous réserve d'une approbation médicale délivrée par le Service médical de l'UNESCO.

#### **E. VISA**

Les candidats sélectionnés devront obtenir, avant leur départ, un visa auprès de l'Ambassade/Consulat de Pologne de leur pays de résidence ou, le cas échéant, auprès de l'Ambassade/Consulat d'un pays voisin.

L'UNESCO et le gouvernement de République de Pologne ne prennent pas en charge les frais de visa ou de délivrance de passeport et les démarches en vue de l'obtention du visa incombent au seul boursier, l'UNESCO n'intervient pas.

#### **F. SOUMISSION DES DOSSIERS DE CANDIDATURE**

**Une** candidature sera acceptée par Etat membre invité. Comme à l'accoutumée, les Commissions nationales des Etats membres invités soumettront les **dossiers originaux** des candidats **en double exemplaire** à Ali Zaid, Chef, Section des bourses d'ici le 21 juin 2013 au plus tard. Une photocopie préalable peut être adressée au fax N° (33.1) 45.68.55.03 ou par courriel : a.zaid@unesco.org; l.zas-friz@unesco.org. Les dossiers devront **IMPERATIVEMENT** comprendre les documents suivants en **DOUBLE EXEMPLAIRE**:

- (i) Deux (2) formulaires UNESCO de demande de bourse (**4 pages**) dûment **complétés en anglais**;
- (ii) Deux photographies épinglées aux formulaires (4x6 cm);
- (iii) Deux copies certifiées conformes (en anglais ou français) de la Licence ou de la Maîtrise obtenues; et,
- (iv) Deux formulaires UNESCO de connaissances linguistiques de la langue anglaise dûment complétés et attestés par un professeur ou un établissement d'accueil (pour les candidats non anglophones).

**Limite de dépôt des candidatures 21 juin 2013 au plus tard**

#### **IMPORTANT**

Avant toute soumission, il incombe aux autorités de s'assurer que le candidat a été instruit des conditions susmentionnées.

Les dossiers incomplets ou reçus après la date indiquée ci-dessus, de même que les candidatures ne correspondant pas aux critères requis, ne seront pas pris en considération.

**Seuls, les candidats sélectionnés recevront une lettre les en informant, par l'intermédiaire de leur Commission nationale respective.**

Toute candidature doit être endossée par la Commission nationale du pays d'origine du candidat.

Toute correspondance doit être en anglais



AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KRAKOW, POLAND  
UNESCO CENTER FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
EDUCATION OF 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/ Poland Co-sponsored Fellowship Programme  
in engineering edition 2013 A (AGH UST)**  
Project Proposal for 6 months

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: Transportation system telematics  
Field of research: Automation, Transport Engineering , mechatronics, mechanical  
Number of fellowships with free tuition sponsored by UNESCO: 2
2. Name of institution: AGH University of Science and Technology,  
Faculty of Faculty of Mechanical Engineering and Robotics  
.....  
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. 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. 2013 (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 p.8)*
5. Developing countries (specification): *UNESCO Member States - 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 if necessary:* .....

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

Dean of the Faculty  
(signature and stamp)

  
prof. dr hab. inż. Antoni Kalukiewicz

Place and date: Krakow, February 25, 2013

Al. Jana Pawła II 40, 32-065 Kraków  
Instytut Inżynierii Mechanicznej i Robotyki  
ul. M. Skłodowej Curie 30, 32-003 Kraków

Kierownik CMPTIE AGH-UNESCO  
  
Prof. dr hab. inż. Janusz Szpytko

AKADEMIA GORNICZO-HUTNICZA  
im. Stanisława Staszka w Krakowie  
WYDZIAŁ INŻYNIERII  
MECHANICZNEJ I ROBOTYKI  
30-059 Kraków Al. Mickiewicza 30  
tel (12) 617 51 18 telefax (12) 617 30 99

Please return form email using both hard format and soft format - address on page 2 and hard signed and stamped copy to the UNESCO AGH Chair office, ul. M. Skłodowej Curie 30, room 205, phone: 81665 0000 till February 28, 2013.  
Date: Thanks a lot for your kindly cooperation

AGH University of Science and Technology, KRAKOW, POLAND  
 UNESCO CHAIR FOR SCIENCE, TECHNOLOGY AND ENGINEERING  
 EDUCATION FOR 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/ Poland Co-sponsored Fellowship Programme  
 in Engineering edition 2013 A (AGH UST)**

*Project Proposal for 6 months*

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
 2013 A dla młodych naukowców w obszarze nauk  
 technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: *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,  
 Faculty of Faculty of Mechanical Engineering and Robotics  
 UNESCO AGH Chair  
 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. Janusz Szpytko  
 Tel.: +48 12 6173103, 6175109  
 Fax: +48 12 6173531, 6175108  
 E-mail szpytko@agh.edu.pl  
 www.agh.edu.pl
4. Project duration: 6 months  
 Proposed starting date: 1.10. 2013 (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 p 8)*
5. Developing countries (specification): *UNESCO Member States - 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 if necessary .....

UNESCO/AGH Fellowships ed. 2013-A in Engineering

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;  
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.

9. Others information: .....

Stamp of the AGH UST Faculty .....

Project Supervisor  
(signature)

Prof. dr hab. inż. Janusz Szpytko

Dean of the Faculty  
(signature and stamp)

prof. dr hab. inż. Antoni Kalukiewicz

Place and date: Krakow, February 25, 2013

AKADEMIA GORNICZO-HUTNICZA  
im. Stanisława Staszica w Krakowie  
WYDZIAŁ INŻYNIERII  
MECHANICZNEJ I ROBOTYKI  
30-059 Kraków, Al. Mickiewicza 30  
tel. (12) 617 51 18 telefax (12) 617 30 99

Kierownik CMPTiE AGH-UNESCO  
Prof. dr hab. inż. Janusz Szpytko

AGH Kraków office, by J. Szpytko on 2013.02.28 16:00 till February 28, 2013.  
Thank a doctor for your kindly cooperation

123

**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/ Poland Co-sponsored Fellowship Programme  
In Engineering edition 2013 A (AGH UST)**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: 2 .....
  
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. 2013 (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 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 if necessary .....  
Preferably in earth engineering, petroleum or computer sciences.

# UNESCO AGH Fellowships ed. 2013-A 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; others please specify if any .....*  
*general knowledge in ...mathematics .....*

8. Project description (in English):

*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. The goal of research is to find best range of technological factors influencing hydraulic fracturing performance. Computer skills will be an advantage.*

*other outputs:*  
*research results*  
*scientific paper*

9. Others information: .....

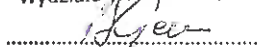
Stamp of the AGH UST Faculty .....

Project Supervisor  
(signature)



Dean of the Faculty  
(signature, and stamp)

Wydziału Wiertnictwa, Nafty i Gazu



Prof. dr hab. inż. Andrzej GONET

Place and date: Krakow, February ...25....., 2013

Akademia Górniczo - Hutnicza  
im. Stanisława Staszycia w Krakowie  
Centrum i Katedra Edukacji i Promocji  
Technologii i Inżynierii

Kierownik CMPTIE AGH-UNESCO

Prof. dr hab. inż. Janusz Szpytko

Please return via email using both \*.doc format and \*.pdf format – address [unesco@agh.edu.pl](mailto:unesco@agh.edu.pl) and hard signed and stamped copy to the UNESCO AGH Chair office, bld. U2, room 201, hours: 8.00-16.00 till February 28, 2013. 14h00. Thanks a lot for your kindly cooperation.

**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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: Drilling and Hydraulic Fracturing Simulation  
Field of research: Drilling .....  
Number of fellowships with free tuition sponsored by UNESCO: 2 .....
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. 2013 (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 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 if necessary .....  
Preferably in earth engineering, petroleum or computer sciences.

# UNESCO AGH Fellowships ed. 2013-A 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; others please specify if any .....*  
*general knowledge in ...mathematics .....*

8. Project description (in English):

*Fellow will take part in research carried out in Drilling and Geoengineering Department. Successful candidate will write computer program to calculate drilling and hydraulic fracturing parameters. Knowledge of C++ programming language is required. Preferably program will run on any platform, so code has to be easy adaptable to Windows or Linux platform. Windows interface is required.*

*other outputs:  
C++ code  
scientific paper*

9. Others information: .....

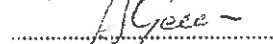
Stamp of the AGH UST Faculty .....

Project Supervisor  
(signature)



Dean of the Faculty  
(signature and stamp)

Wydziału Wiertnictwa, Nafty i Gazu



Prof. dr hab. inż. Andrzej GONET

Place and date: Krakow, February ...25....., 2013

Akademia Górniczo-Hutnicza  
im. Stanisława Staszycia w Krakowie  
Centrum Współpracy z UNESCO  
Technologii i Edukacji AGH - UNESCO  
Al. A. Mickiewicza 20, 30-059 Kraków

Kierownik CMPTIE AGH-UNESCO

Prof. dr hab. inż. Jacek Szpytko

Please return via email using both \*.doc format and \*.pdf format – address [unesco@agh.edu.pl](mailto:unesco@agh.edu.pl) and hand signed and stamped copy to the UNESCO AGH Chair office, bld. U2, room 201, hours: 8.00-16.00 till February 28, 2013.

14h00. Thanks a lot for your kindly cooperation.



**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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)**  
Project Proposal for 6 months

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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**

4. Project duration: **6 months**

Proposed starting date: **1.10. 2013** (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*

## UNESCO AGH Fellowships ed. 2013-A in Engineering

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)

*Katarzyna Nawojczyk*

Dean of the Faculty  
(signature and stamp)  
DZISKAN  
Wydziału Humanistycznego  
*Janusz Mucha*  
.....Profesor.....Janusz Mucha

Place and date: Krakow, 26<sup>th</sup> February, 2013

Al. Mickiewicza - Instytut Kierownik CMPTIE AGH-UNESCO  
in. Stanisław Staszko-Krakowie  
Centrum Współpracy z Zagranicą  
Prof. dr hab. inż. Janusz Szpytko  
21. 5. 2013 r. Kraków 30-041 00 00 00

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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)**

Project Proposal for 6 months

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: Availability problems in transportation systems and devices  
Field of research: Engineering Technology, Transport Engineering, mechatronics  
Number of fellowships with free tuition sponsored by UNESCO: 2
2. Name of institution: AGH University of Science and Technology,  
Faculty of Faculty of Mechanical Engineering and Robotics  
UNESCO AGH Chair  
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. Janusz Szpytko  
Tel.: +48 12 6173103, 6175109  
Fax: +48 12 6173531, 6175108  
E-mail szpytko@agh.edu.pl  
www.agh.edu.pl
4. Project duration: 6 months  
Proposed starting date: 1.10. 2013 (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 p.8)*
5. Developing countries (specification): *UNESCO Member States - 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 if necessary .....

UNESCO AGH Fellowships Ed. 2013-A in Engineering

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;  
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

Dean of the Faculty  
(signature and stamp)

prof. dr hab. inż. Antoni Kalukiewicz

AKADEMIA GORNICZO-HUTNICZA  
im. Stanisława Staszica w Krakowie  
WYDZIAŁ INŻYNIERII  
MECHANICZNEJ I ROBOTYKI  
30-059 Kraków Al. Mickiewicza 30  
tel (12) 617 51 18 telefax (12) 617 30 99

Place and date: Kraków, February 25, 2013  
Kierownik CMPTiE AGH-UNESCO  
Prof. dr hab. inż. Janusz Szpytko

the secretary of the committee will send you a copy of the award - address envelope with signed and stamped copy to the UNESCO AGH Committee, room 201, hours 09:00-15:00 till February 28, 2013

**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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: Laser. Biotechnology as Innovative Method of Adaptation of Selected Plans to Common Pollutants of the Natural Environment as New Tool for Creation Green Jobs  
Field of research: Environmental Protection Engineering and Biotechnology  
Number of fellowships with free tuition sponsored by UNESCO: 2.

2. Name of institution: AGH University of Science and Technology,  
Faculty of Mining Surveying and Environmental Engineering  
*Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland*

3. Name and Surname, title and full contact data of project supervisor:  
Full prof. Jan W. Dobrowolski, Ph.D., D.Sc., dr.h.c.  
Tel.: +48 12 617 22 53  
Fax:  
E-mail [dobrowol@agh.edu.pl](mailto:dobrowol@agh.edu.pl)  
www: [www. www.agh.edu.pl/en](http://www.agh.edu.pl/en)

4. Project duration: 6 months  
Proposed starting date: 1.10.2013 (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 p.8)*

# UNESCO AGH Fellowships ed. 2013-A in Engineering

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

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

6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree, please specify in more details if necessary ..basic knowledge in environmental engineering or environmental protection and biotechnology.....

7. Qualifications required: *for example*  
*be proficient in reading and writing in English;*  
*be not more than ...39..... years of age; and be in good health, both physically and mentally; others please specify if any* .....  
*general knowledge in protection of the natural environment and ecoinnovation ....*  
*(environmentally friendly technologies)and interest in promotion sustainable development in home country.....*

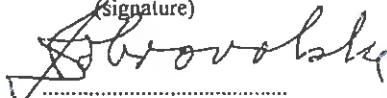
8. Project description (in English):

*R&D results and project description optional (300 words max): The concept of application of Laser biotechnology for more efficient decontamination of the natural environment (by bioremediation of toxic metals and biodegradation of harmful substances-xenobiotics) as well as better reclamation of deteriorated areas and biomass production for bioenergy in areas out of use-was introduced by prof J.W..Dobrowolski from AGH-UST as the Polish priority on international scale. Following long-term laboratory and field experiments carried out by prof. Dobrowolski and his formal diploma and doctoral students the subject of the project would be innovative experimental study in his Laboratory of Laser Biostimulation focused on better adaptation of selected plants to pollutants of soil and water related to selected anthropogenic pollutants (e.g. selected metals and hydrocarbons connected with oil exploitation) and climatic change (salinity of soil). The output of this laboratory study would be useful for reclamation and management some deteriorated areas*

9. Others information: .....Expected result of research-developing studies would be very useful for more efficient management of different region of the home country of candidate as well as for production of biomass (e.g. useful for industry or bioenergy production) not instead of food production. This will be also creative contribution to creation many new Green Jobs as recommended by UNs and UNESCO Green Economy for Sustainable Development all over the world.....

Stamp of the AGH UST Faculty

Project Supervisor  
(Signature)



Krakow, 25 March....., 2013



Dean of the Faculty  
(Signature and stamp)



Prof. dr hab. inż. Stanisław Gruszczyński  
-1-

Kierownik CMPTiE AGH-UNESCO



Prof. dr hab. inż. Janusz Szpytko

**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/ Poland Co-sponsored Fellowship Programme  
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**Project Proposal for 6 months**

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2013 A dla młodych naukowców w obszarze nauk  
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UNESCO - AGH 2013 Project A in Engineering: 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: Drilling Parameters Influence on Injection Performance  
Field of research: Geoengineering .....  
Number of fellowships with free tuition sponsored by UNESCO: 2 .....
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. 2013 (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 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 if necessary .....  
Preferably in earth engineering, petroleum or computer sciences.

# UNESCO AGH Fellowships ed. 2013-A 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; others please specify if any .....*  
*general knowledge in ...mathematics .....*

8. Project description (in English):

*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. Using data, influence of drilling parameters will be investigated. To find best solution new model based on research results is necessary. Successful candidate will work in Drilling and Geoengineering Department laboratory using standard and modern laboratory equipment and software. Computer skills will be an advantage.*

*other outputs:*  
*research results*  
*scientific paper*

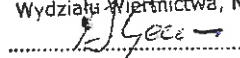
9. Others information: .....

Stamp of the AGH UST Faculty .....

Project Supervisor  
(signature)



Dean of the Faculty  
(signature and stamp)

Dziękuję  
Wydziału Wiertnictwa, Nafty i Gazu  


Prof. dr hab. Inż. Andrzej GONET

Place and date: Krakow, February ...25....., 2013

Akademia Górniczo-Hutnicza  
im. Stanisława Staszica w Katowicach  
Centrum Nauk o Ziemi i Środowisku  
Technologia Wiertnictwa i Nafty

Kierownik CMPTiE AGH-UNESCO

  
Prof. dr hab. inż. Janusz Szpytko

Please return via email using both \*.doc format and \*.pdf format – address [unesco@agh.edu.pl](mailto:unesco@agh.edu.pl) and hard signed and stamped copy to the UNESCO AGH Chair office, bld. U2, room 201, hours: 8.00-16.00 until February 28, 2013. 14h00. Thanks a lot for your kindly cooperation.



1000

**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/ Poland Co-sponsored Fellowship Programme**  
**in Engineering edition 2013 A (AGH UST)**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja**  
**2013 A dla młodych naukowców w obszarze nauk**  
**technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: .....Optimising Borehole Heat Exchangers Systems.....  
Field of research: ...Geology and Mining.....  
Number of fellowships with free tuition sponsored by UNESCO: ...2.....
  
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:  
Tomasz Śliwa, PhD, A4 room 114 .....  
Tel.: +48 12 ..617 37 84.....  
Fax: +48 12 ...617 22 06.....  
E-mail .....sliwa@agh.edu.pl.....  
www .....
  
4. Project duration:       6 months  
Proposed starting date: 1.10. 2013 (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 p.8)*
  
5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific)*  
.....*all possible*.....
  
6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in **more details** if necessary .....M.Sc in Civil Engineering.....  
.....

UNESCO AGH Fellowships ed. 2013-A in Engineering

7. Qualifications required: *for example*  
*be proficient in reading and writing in English;*  
*be not more than 30. years of age; and be in good health, both physically and mentally;*  
*others please specify if any* .....  
*general knowledge in ...mathematic*.....

8. Project description (in English):

*R&D results and project description optional (300 words max):*

Energy saving is very important around the world. Heat pumps can realize energy saving and renewable energy extraction. Many systems based on borehole heat exchangers (BHE). Constructional and exploitation parameters affect for economical efficiency. The project cover many aspects of borehole heat exchangers. Result of the project is important for all countries, with heat and cold climate. The result is computer software for dimensioning BHEs systems.

*other outputs (100 words max):*  
papers, monograph, ppt presentations


9. Others information: ...work in Geoennergetics Laboratory of Drilling, Oil and Gas Faculty AGH .....

Stamp of the AGH UST Faculty .....

Project Supervisor  
(signature)



Dean of the Faculty  
(signature and stamp)  
Wydziału Wiertnictwa, Nafty i Gazu

  
Prof. dr hab. inż. Andrzej GONET

Place and date: Krakow, February 25 2013  
Akademia Górniczo-Hutnicza  
im. Stanisława Staszica w Krakowie  
Centrum Inżynierii i Techniki  
Technologii Wiertnictwa, Nafty i Gazu  
Al. Adama Mickiewicza 30, 31-064 Kraków

Kierownik CMPTIE AGH-UNESCO

  
Prof. dr hab. inż. Janusz Szpytko

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 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/ Poland Co-sponsored Fellowship Programme  
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**Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
 2013 A dla młodych naukowców w obszarze nauk  
 technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: **Assessment of geotouristic values of selected geological objects**  
 Field of research: **Geotourism**  
 Number of fellowships with free tuition sponsored by UNESCO: 1-2
  
2. Name of institution: AGH University of Science and Technology,  
**Faculty of Geology, Geophysics and Environmental Protection/ Wydział Geologii,  
 Geofizyki i Ochrony Środowiska**  
 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. Tadeusz Słomka  
 Tel.: +48 12 617 2603  
 Fax: + 48 12 6334672  
 E-mail: [tslomka@agh.edu.pl](mailto:tslomka@agh.edu.pl)  
[www.agh.edu.pl](http://www.agh.edu.pl)
  
4. Project duration: 6 months  
 Proposed starting date: 1.10. 2013 (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 p.8)*
  
5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific) ALL*
  
6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
 please specify in more details if necessary .....  
 B.Sc. or M.Sc. degree in geology, geophysics and environmental protection

## UNESCO AGH Fellowships ed. 2013-A 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;*  
*others please specify if any* .....  
*general knowledge in Geotourism*

8. Project description (in English):

*R&D results and project description optional (300 words max):*

Assessment of geotouristic values of selected geological objects

*other outputs (100 words max):*

conference paper, publication, practical replacement, report

9. Others information: .....

Stamp of the AGH UST Faculty

AGH UNIVERSITY  
OF SCIENCE AND TECHNOLOGY  
Al. Mickiewicza 30 Ave., 30-059 Krakow  
POLAND

Akademia Górniczo-Hutnicza  
im. Stanisława Staszica w Krakowie  
WYDZIAŁ GEOLOGII, GEOFIZYKI  
I OCHRONY ŚRODOWISKA  
30-059 Kraków, Al. Mickiewicza 30  
tel. (012) 617 36-82; fax (012) 633-29 36  
NIP 675 000 19 23

Project Supervisor

(signature)

RECTOR

AGH University of Science and Technology

Tadeusz Słomka, Prof. D. Sc.

Place and date: Krakow, February 28, 2013

Dean of the Faculty

(signature and stamp)

RZEKA

Prof. dr hab. inż. Adam Piestrzyński

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

Kierownik CMBTIE AGH-UNESCO

Prof. dr hab. inż. Janusz Szpytko

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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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)  
Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: Nanolaminate materials in Ti-Al-C-N system obtained by SHS method..  
Field of research: Materials science and ceramics  
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 and Surname , title and full contact data of project supervisor:  
Dr Leszek Chlubny  
Tel.: +48 12617 52 07  
Fax: +48 12 633 15 93  
E-mail leszek@agh.edu.pl  
www www.agh.edu.pl
4. Project duration: 6 months  
Proposed starting date: 1.10. 2013 (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 p.8)*
5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific)*  
.....
6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,  
please specify in more details if necessary .....

## UNESCO AGH Fellowships ed. 2013-A in Engineering

### 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; and have general knowledge in chemistry, material science and ceramics.....*

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

*Research and development of synthesis of nanolaminate MAX-phase materials in Ti-Al-C-N system.*

- *Application of SHS synthesis for obtaining powders of MAX phase materials..*
- *Selection of reaction conditions.*
- *Sintering of MAX phase and optimizations of sintering conditions.*
- *Testing of mechanical, electrical and thermal properties of dense materials.*

*Obtaining of new perspective materials*

9. Others information: .....

Stamp of the AGH UST Faculty .....

Project Supervisor  
(signature)

Dr Leszek Chlubny

Place and date: Krakow, February 28, 2013

Akademia Górniczo-Hutnicza  
im. Stanisława Staszica w Krakowie  
Centrum Inżynierii i Techniki  
Technologii i Innowacji  
AGH-UST

Dean of the Faculty  
(signature and stamp)

Prof. dr hab. inż. Włodzimierz Mozgawa

PRODZIEKAN  
ds. Ogólnych i Nauki

prof. dr hab. inż. Włodzimierz Mozgawa

Kierownik CMPTIE AGH-UNESCO

Prof. dr hab. inż. Janusz Szpytko

**AGH University of Science and Technology, KRAKOW, POLAND**  
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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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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 Av. 30, 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 5207  
Fax: +48 12 .633 1593  
E-mail mgajek@agh.edu.pl  
www.agh.edu.pl

4. Project duration: 6 months  
Proposed starting date: 1.10. 2013 (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,  
.....

7. Qualifications required:

## UNESCO AGH Fellowships ed. 2013-A 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;  
general knowledge in ceramic engineering*

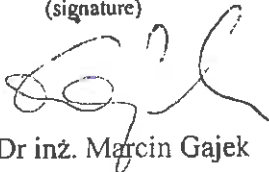
### 8. Project description (in English):

*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 .....

Project Supervisor  
(signature)



Dr inż. Marcin Gajek

Place and date: Krakow, February 28, 2013

Akademia Górnicza - klasyczna  
im. Stanisława Staszica - Katedra i  
Centrum Badawczo-Edukacyjne  
Technologii i Inżynierii Ceramiki  
AGH-UST, Al. Mickiewicza 30, 32-063 Kraków

Dean of the Faculty  
(signature and stamp)

Prof. dr hab. inż. Włodzimierz Mozgawa

PRODZIEKAN  
ds. Ogólnych i Nauki

Prof. dr hab. inż. Włodzimierz Mozgawa

Kierownik CMPTIE AGH-UNESCO

Prof. dr hab. inż. Janusz Szpytko



**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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)  
Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: Rope based transport operation

Field of research: Mechanical Engineering

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

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 and Surname , title and full contact data of project supervisor:

*Marian Wójcik, Dr hab. Eng.* .....

Tel.: +48 12 617 3683.....

Fax: +48 12 636 01 44 .....

E-mail [marianw@agh.edu.pl](mailto:marianw@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. 2013 (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 p.8)*

5. Developing countries (specification): *UNESCO Member States - ( Latin America)*

*All regions* .....

# UNESCO AGH Fellowships ed. 2013-A in Engineering

6 Academic requirements: Candidates should have a B.Sc. or M.Sc. degree, Preferably in mechanical engineering, transportation engineering, rope systems and devices, CAD/ CAM, exploitation, diagnostics.

7. Qualifications required:

*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; others .....*  
*general knowledge in ...mathematics .....*

8. Project description (in English):

*Dynamics of transport installations*  
*Systems of person rope transport*  
*Exploitation of transport installations*  
*Emergency conditions of transport systems*

*other outputs:*  
*research results*  
*scientific papers, practical training and diagnostics experiences*

9. Others information: .....

Stamp of the AGH UST Faculty

AKADEMIA GORNICZO-HUTNICZA  
im. Stanisława Staszica w Krakowie  
WYDZIAŁ INŻYNIERII  
MECHANICZNEJ I ROBOTYKI  
30-059 Kraków, Al. Mickiewicza 30  
tel. (12) 617 51 18 telefax (12) 617 30 99

Project Supervisor  
(signature) WNIK  
KATEDRA TRANSPORTU LINOWEGO  
*Milogaj*  
Dr hab. inż. Marcin Witek - prof. dr hab. AGH

Dean of the Faculty  
(signature and stamp)  
DZIEKAN  
Wydziału Inżynierii  
Mechanicznej i Robotyki

Place and date: Krakow, February ...25... 2013

Kierownik CMPTIE AGH-UNESCO  
Prof. dr hab. inż. Antoni Kalukiewicz  
Akademia Górniczo-Hutnicza  
im. Stanisława Staszica w Krakowie  
Centrum Międzynarodowej Promocji  
Technologii i Inżynierii  
AGH-UNESCO

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**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/ Poland Co-sponsored Fellowship Programme  
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Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
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UNESCO - AGH 2013 Project A in Engineering: 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, Robotics  
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,..  
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.pl](mailto:cieslik@agh.edu.pl).....  
WWW <http://www.krim.agh.edu.pl/index.php?faction=pracownicy>
4. Project duration: 6 months  
Proposed starting date: 1.10. 2013 (exact date to be agreed upon by the selected fellows and host Institution)  
Language: English (Russian as additional language for communication)  
Scientific contents: individual research programme under supervision of tutor (see 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: Candidate should have a B.Sc. or M.Sc. degree in Mechanics, Mathematics or Robotics, Candidate should have an experience in theoretical mechanics, theory of machines and mechanisms, mathematical analysis, robotics

# UNESCO AGH Fellowships ed. 2013-A in Engineering

## 7. Qualifications required:

*be proficient in reading and writing in English (optionally in Russian)  
be not more than 35 years of age; and be in good health, both physically and mentally;  
others: general knowledge in mathematical analysis, physics of solid bodies, mechanics (kinematics and dynamics), theory of machines and mechanisms, robotics,*

## 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 Assur group of fourth class with six degrees of freedom by dynamic planning and experimental design.

### Tasks:

- Kinematics synthesis and analysis, decision of reverse task of kinematics of spatial parallel manipulator on the base of Assur group of fourth class with six DOF.
- Dynamic analysis and synthesis of spatial parallel manipulator on the base of Assur group of fourth class with six degrees of freedom.
- Development of operating model of parallel manipulator on the base of Assur group of fourth class with six degrees of freedom.
- Development of function of programmatic management of parallel manipulator on the base of Assur group of fourth class with six degrees of freedom.
- Development of application of management a parallel manipulator package.
- Lead through 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 higher class.
- Method of synthesis of function management a spatial manipulator on a base numerical symbolic calculations.
- Application of spatial parallel manipulator software working on the base of mechanisms of higher class.

## 9. Others information: .....

Stamp of the AGH UST Faculty  
im. Stanisława Staszica  
50-059 Kraków, Al. Mickiewicza 30  
Wydział Inżynierii Mechanicznej i Robotyki  
tel. 017 30 20 61 46, 633 91 05

Project Supervisor  
(signature)

*Janusz Szpytko*

Prof. dr hab. inż. Antoni Kalukiewicz  
Kierownik CMPTiE AGH-UNESCO

DZIEKAN  
Wydziału Inżynierii  
Mechanicznej i Robotyki

*Antoni Kalukiewicz*  
Prof. dr hab. inż. Antoni Kalukiewicz

Place and date: Krakow, February 27<sup>th</sup> 2013  
Prof. dr hab. inż. Janusz Szpytko

Please return via email using both \*.doc format and \*.pdf format – address [unesco@agh.edu.pl](mailto:unesco@agh.edu.pl) and hard signed and stamped copy to the UNESCO AGH Chair office, bld. U2, room 201, hours: 8.00-16.00 till February 28, 2013, 14h00. Thanks a lot for your kindly cooperation.

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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

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UNESCO - AGH 2013 Project A in Engineering: 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: **Mining and Geology, Environmental Engineering**  
Field of research: **Mining and Geoengineering**  
Number of fellowships with free tuition sponsored by UNESCO: 1-2

2. Name of institution: AGH University of Science and Technology,  
**Faculty of Mining and Geoengineering**  
Full address: A.Mickiewicza Av. 30, PL 30-059 Krakow, Poland

3. Name and Surname , title and full contact data of project supervisor:  
**Dr hab. inż. Marek Cala, prof. AGH**  
Tel.: + 48 12 617 21 62  
Fax: + 48 12 617 37 60  
E-mail: [cala@agh.edu.pl](mailto:cala@agh.edu.pl)  
[www.agh.edu.pl](http://www.agh.edu.pl), [www.gorn.agh.edu.pl](http://www.gorn.agh.edu.pl)

4. Project duration: 6 months  
Proposed starting date: 1.10. 2013 (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 p.8)*

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

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

7. Qualifications required: *for example*

# UNESCO AGH Fellowships ed. 2013-A in Engineering

*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;  
others please specify if any .....  
general knowledge in mining, geoenvironmental, environmental engineering*

## 8. Project description (in English):

*R&D results and project description optional (300 words max):*

The project may focus on two optional tasks.

The first one is the application of numerical methods for solving practical problems from the field of geotechnical and rock engineering. The candidate will get familiar with several numerical codes used in underground and open pit mining.

The second one is mine land reclamation. During last 20 years many underground and open-pit mines were closed in Poland. The project will deal with operations for safe mine closing procedures, several strategies of planning of post-mining area reclamation and far range plans for complete area revitalization.

## 9. Others information: .....

Stamp of the AGH UST Faculty

AKADEMIA GÓRNICZO-HUTNICZA  
im. STANISŁAWA STASZICA W KRAKOWIE  
WYDZIAŁ GÓRNICZWA I GEOINŻYNIERII  
30-059 Kraków, Al. Mickiewicza 30  
tel.12-617-21-15; tel/fax 12-423-37-60

Project Supervisor  
(signature)

.....Dr hab. inż. Marek Jęta, prof. AGH.....

Dean of the Faculty  
(signature and stamp)

**DZIEKAN**  
*[Signature]*  
Prof. dr hab. inż. Piotr Czaja

Place and date: Krakow, February 28, 2013

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

**Kierownik CMPTIE AGH-UNESCO**

**Prof. dr hab. inż. Janusz Szpytko**

Please return via email using both \*.doc format and \*.pdf format – address [unesco@agh.edu.pl](mailto:unesco@agh.edu.pl) and hard signed and stamped copy to the UNESCO AGH Chair office, bld. G2, room 201, hours: 8.00-16.00 till February 28, 2013.  
14h00. Thanks a lot for your kindly cooperation.

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. 2013-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 & reservoir geophysics  
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. 2013 (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  
.....

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

### 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: ABL TO WORK IN TEAM*

*general knowledge in EARTH SCIENCES, MATHEMATICS, PHYSICS*

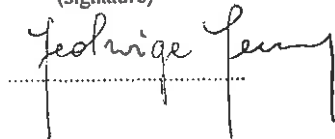
### 8. Project description (in English):

*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

Project Supervisor  
(signature)



Dean of the Faculty  
(signature and stamp)

DZIEKAN  
  
prof. dr hab. inż. Adam Piestrzyński

Place and date: Krakow, 13.02. 2012

Al. Mickiewicza 30, 31-064 Kraków  
in. Stanisław Staszyc  
Centrum Badawcze i Technologiczne  
Technologia i Technologia  
Al. A. Mickiewicza 30, 31-064 Kraków

Kierownik CMETIE AGH-UNESCO

  
Prof. dr hab. inż. Janusz Szpytko



**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/ Poland Co-sponsored Fellowship Programme  
 in Engineering edition 2013 A (AGH UST)**  
**Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
 2013 A dla młodych naukowców w obszarze nauk  
 technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: Optimization of multistage fracking process in horizontal gas wells in tight and shale reservoirs.  
 Field of research: Reservoir engineering of unconventional resources  
 Number of fellowships with free tuition sponsored by UNESCO: 2.
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:  
 Stanislaw Nagy, PhD., DSc., P.E.  
 Tel.: +48 12 617 22 09  
 Fax: +48 12 617 22 19  
 E-mail: stanislaw.nagy@agh.edu.pl  
 www: [www: www.agh.edu.pl/en](http://www.agh.edu.pl/en); <http://www.kig.wnaft.agh.edu.pl/en>
4. Project duration: 6 months  
 Proposed starting date: after 1<sup>st</sup> Oktober (exact date to be agreed upon by the selected fellows and host Institution)  
 Language: English, Russian  
 Scientific contents: *individual research programme under supervision of tutor (see p.8)*
5. Developing countries (specification): *UNESCO Member States - please specify countries or region (Asia, Africa, Latin America, Caribbean and Pacific)*  
*Asia and Africa (Kazakhstan, Georgia, Ukraine, Uzbekistan, Azerbaijan, Armenia, Malaysia, Philippines, Brunei, Ghana).*
6. Academic requirements: Candidates should have a B.Sc. or M.Sc. degree,
7. Qualifications required: *for example*  
*be proficient in reading and writing in English (Advanced); be not more than 40 years of age; and be in good health, both physically and mentally; others.....*

8. Project description (in English):

Stimulation of the well to increasing low permeability of the reservoir, lies in hydraulic fracturing and the formation of a grid of fractures. A low-viscosity fluid is injected to the well under a high pressure with higher rate than it is expected to flow. The hydraulic resistivity related to the flow in the rock formation increases, the pressure in the well grows above the fracturing pressure making the rock matrix break up and form a fracture or a network of fractures. The important factor stimulating origin of fracture formation is the presence of silica or carbonates in the clayey rocks. The fracture can be protected against its closing by 'proppant'. Some literature analysis reveals that the efficiency of the stimulation can be increased by another distribution of fractures, formed by orthogonal positioning of natural and artificial fractures.

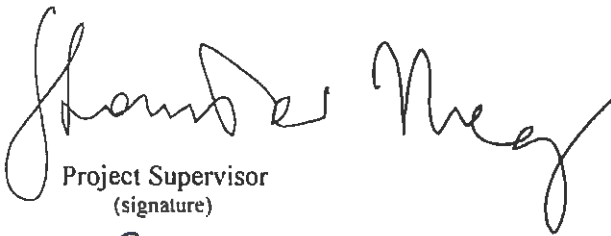
The aim of project is to study of efficiency of possible fracturing process to estimate the best technique for selected geologic conditions. Another goal is to design process without or with minimize amount of hazard substances added into fracturing fluid.

The planned topics:

1. The creation of fracking model for simple case
2. The creation of fracking model for complex geology
3. The build of optimisation model for efficiency of fracking process
4. The systematization of received results.


9. Others information:

Stamp of the AGH Faculty

  
Project Supervisor  
(signature)

Feb. 25. 2013



Prodziekan  
Wydziału Wiertnictwa, Nafty i Gazu  
  
dr hab. inż. Czesław Rybicki

Dean of the Faculty  
(signature and stamp)

Kierownik CMPTiE AGH-UNESCO

  
Prof. dr hab. inż. Janusz Szpytko

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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)**  
Project Proposal for 6 months

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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 development of software for embedded systems*

Field of research: Software Engineering

Number of fellowships with free tuition sponsored by UNESCO: 2

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

Wydział Elektrotechniki, Automatyki, Informatyki i Inżynierii Biomedycznej

Faculty of Faculty of Electrical Engineering, Automatics, Computer Science and Biomedical Engineering

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. Tomasz Szmuc

Tel.: +48 12 6172040

Fax: +48 12 633-41-99

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

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

4. Project duration: 6 months

Proposed starting date: 1.10. 2013 (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 p.8)*

5. Developing countries (specification): *UNESCO Member States - 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 if necessary

# UNESCO AGH Fellowships ed. 2013-A in Engineering

## 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;  
good skills in computer engineering, 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 embedded 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:*

Modification of existing software development methodology.  
Software modules supporting the verification.

### *other outputs:*

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

9. Others information: .....

Stamp of the AGH UST Faculty .....

Project Supervisor

(signature)

Prof. dr hab. inż. Tomasz Szmuc

Dean of the Faculty

(signature and stamp)

DZIEKAN WYDZIAŁU

dr hab. inż. Antoni Cieśla, prof. nadzw.  
dr hab. inż. Antoni Cieśla, prof. n.

Place and date: Krakow, February 25, 2013

Akademia Górniczo - Hutnicza  
im. Stanisława Staszica w Krakowie  
Centralny Instytut Badawczy  
Technologii i Organizacji Pracy  
Al. Mickiewicza 30, 31-064 Kraków

Kierownik CMPTIE AGH-UNESCO

Prof. dr hab. inż. Janusz Szpytko

Please return via email using both \*.doc format and \*.pdf format – address [unesco@agh.edu.pl](mailto:unesco@agh.edu.pl) and hard signed and stamped copy to the UNESCO AGH Chair office, bld. U2, room 201, hours: 8.00-16.00 till February 28, 2013, 14h00. Thanks a lot for your kindly cooperation.

**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/ Poland Co-sponsored Fellowship Programme  
in Engineering edition 2013 A (AGH UST)**  
Project Proposal for 6 months

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
2013 A dla młodych naukowców w obszarze nauk  
technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: .

**Axis switching impact on the selected physical properties of magnetite exhibiting first and second order Verwey transition.....**

Field of research: **technical 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, Faculty of Solid State Physics**

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

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

**Zbigniew Kałol, professor.**

Tel.: **+48 12 6172007.....**

Fax: **+ (48) 12-423-35-70**

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

www **http://galaxy.uci.agh.edu.pl/~kakol/**

4. Project duration: 6 months

Proposed starting date: 1.10. 2013 (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 p.8)*

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

.....**any**.....

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

please specify in more details if necessary .....

UNESCO AGH Fellowships ed. 2013-A in Engineering

... B.Sc. or M.Sc. degree in physics, technical physics or material science 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; others please specify if any general knowledge in Physics*

8. Project description (in English):

*R&D results and project description optional (300 words max):*  
At  $T_V \approx 120K$ , magnetite,  $Fe_3O_4$ , undergoes the Verwey phase transition where electrical conduction drops 100 times on cooling, what is associated with the change of lattice symmetry from high-T cubic to monoclinic Cc and with other spectacular anomalies in many physical characteristics. In case the cooling across  $T_V$  is performed in an external magnetic field aligned along one of  $\langle 100 \rangle$  (cubic) directions, this particular direction becomes the monoclinic c axis as well as the easy magnetization axis. If, now, magnetic field is applied below  $T_V$  along some other  $\langle 100 \rangle$  direction, the c (and the easy axis) switches to this direction ("easy axis switching", AS) causing anomalies in magnetization, magnetostriction and some other physical characteristics. The aim of the project is to observe how some of these anomalies triggered by the AS differ in magnetite undergoing the Verwey transition of first (discontinuous) and continuous character (slightly doped with, e.g. Zn).  
*other outputs (100 words max):*  
Apart from the scientific effects, the scholar will become accustomed with the measurements performed on modern measuring stations, like Quantum Design PPMS, that became a world-wide standard for typical physical properties measurements.

9. Others information:

Stamp of the AGH UST Faculty

Project Supervisor (signature)

*Janusz Szpytko*

Dean of the Faculty (signature and stamp)

*Janusz Szpytko*

Place and date: Krakow, February 28, 2013

Akademia Górniczo-Hutnicza im. Stanisława Staszica w Krakowie  
Centrum Inżynierii i Techniki  
Technologia i Inżynieria

Kierownik CMPTIE AGH-UNESCO

*Janusz Szpytko*  
Prof. dr hab. inż. Janusz Szpytko

Please return via email using both \*.doc format and \*.pdf format – address [unesco@agh.edu.pl](mailto:unesco@agh.edu.pl) and hard signed and stamped copy to the UNESCO AGH Chair office, bld. U2, room 201, hours: 8.00-16.00 till February 28, 2013.  
14h00 Thanks a lot for your kindly cooperation.

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/ Poland Co-sponsored Fellowship Programme  
 in Engineering edition 2013 A (AGH UST)**

**Project Proposal for 6 months**

**Naukowa oferta stypendialna Centrum AGH-UNESCO edycja  
 2013 A dla młodych naukowców w obszarze nauk  
 technicznych z krajów wzrostu gospodarczego**

UNESCO - AGH 2013 Project A in Engineering: 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: *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 Faculty of Mechanical Engineering and Robotics  
 UNESCO AGH Chair  
 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. Janusz Szpytko  
 Tel.: +48 12 6173103, 6175109  
 Fax: +48 12 6173531, 6175108  
 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. 2013 (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 p 8)*
5. Developing countries (specification): *UNESCO Member States - 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 if necessary .....

UNESCO AGH Fellowships ed. 2013 A in Engineering

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;  
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

Dean of the Faculty  
(signature and stamp)

prof. dr hab. inż. Antoni Kalukiewicz

Place and date: Krakow, February 25, 2013  
Akademia Górniczo-Hutnicza  
im. Stanisława Staszycia w Krakowie  
Kierownik CMPTE AGH-UNESCO  
WYDZIAŁ INŻYNIERII  
MECHANICZNEJ I ROBOTYKI  
30-059 Kraków, Al Mickiewicza 30  
tel (12) 617 51 18, telefax (12) 617 30 95  
Prof. dr hab. inż. Janusz Szpytko  
All applications should be submitted in hard signed and stamped copy to the UNESCO AGH Office before 20:00 on 28 February 2013





## DEMANDE DE BOURSE

7, place de Fontenoy, 75352 Paris 07 SP  
 téléphone : (33.1) 45.68.10.00  
 télex: 204461 Paris  
 270602 Paris  
 téléfax UNESCO: (33.1) 45.66.94.29

au titre du  
**PROGRAMME DE BOURSES DE L'UNESCO**

**Instructions :** Le présent formulaire doit être présenté par l'organisme gouvernemental compétent et chacune de ces parties doit être remplie complètement et avec précision. *Le formulaire doit être communiqué en trois exemplaires.* Les informations demandées doivent être soit tapées à la machine, soit manuscrites à l'encre en majuscules d'imprimerie. Lorsque l'espace est insuffisant pour contenir les informations, utiliser une feuille blanche à attacher (en trois exemplaires) au formulaire.

### A. Présentation officielle

Le Gouvernement du..... présente la candidature de..... à une bourse de l'UNESCO dans le domaine..... commençant le..... pour une durée de..... au titre du Programme et/ou du Projet.....

Le signataire certifie que les directives du Gouvernement visent la définition d'un programme d'étude qui permettra au candidat d'accroître à l'avenir sa contribution au développement de son pays.

Si une bourse était attribuée, le Gouvernement :

a) donnerait au boursier les autorisations nécessaires pour se rendre dans le pays d'étude ;

b) veillerait à ce que le boursier puisse faire face à ses responsabilités personnelles et familiales pendant la durée de sa bourse en maintenant, pour autant que cela soit nécessaire, le service de tout ou partie de la rémunération du boursier ;

c) faciliterait l'emploi du boursier après la fin de la bourse au poste mentionné dans le présent formulaire.

Les informations communiquées ci-dessous sont complètes et exactes.

PRÉSENTÉ AU NOM DE : (cachet)..... Service officiel..... Date.....

PAR : ..... Nom et titre du fonctionnaire autorisé..... Signature.....

### B. Renseignements personnels concernant le candidat

Nom de famille	Prénom(s)	Nationalité	Profession
Domicile permanent		Téléphone.....	Joindre une photo (facultatif)
		E-mail.....	
Adresse postale (si elle diffère de la précédente).....		Téléphone.....	
		E-mail.....	
Date de naissance jour      mois      année	Pays et lieu de naissance	Sexe	
Situation de famille	Nom et prénom du conjoint	Nombre et âge des enfants	Nom et adresse de la personne à prévenir en cas d'accident

## Études antérieures

Établissements d'enseignement (nom, adresse et pays)	Années d'études		Diplômes, titres : Indiquer les matières principales	Date d'obten- tion
	de	à		
Secondaire, technique, etc. ..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....
Post-secondaire, universitaire ou équivalent ..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....

**IMPORTANT :** Pour être complète, la présente demande de bourse doit être accompagnée des copies certifiées conformes des titres obtenus et des certificats décrivant les études théoriques et pratiques suivies par le candidat (avec indication des mentions ou des notes obtenues)

## Autres études

Mentionner également d'autres formes d'études telles que les stages de formation ou de perfectionnement

## Bourses

Quelles sont les études mentionnées ci-dessus qui ont été effectuées grâce à une bourse ? Indiquer l'organisme qui a attribué la bourse

## Séjours à l'étranger

Énumérer les séjours notables à l'étranger qui ne figurent pas ci-dessus

## Publications et recherche

Énumérer tous travaux significatifs publiés (indiquer le nom de l'éditeur et la date de publication) ainsi que les principaux travaux de recherche entrepris

## Connaissance des langues

Langue maternelle :

Autres langues	Lire		Comprendre la langue parlée		Parler		Rédiger	
	Couramment	Difficilement	Entièrement	Partiellement	Couramment	Difficilement	Correctement	Difficilement
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....

L'imprimé de l'UNESCO intitulé « Certificat de connaissances linguistiques » doit être rempli et joint à la présente demande.

## Références

Indiquer trois personnes (parents et alliés exclus) qui pourraient fournir une appréciation des capacités du candidat. Ces personnes doivent normalement être des professeurs ou des directeurs d'études connaissant les travaux antérieurs du candidat.

Nom et prénom	Titre et adresse
.....	.....
.....	.....
.....	.....

### Activités professionnelles antérieures

Employeur	Années de service		Responsabilités
	de	à	

### Poste actuel

Nom et adresse de l'employeur		Fonctions présentes
.....		
Années de service de ..... à .....		
Désignation du poste ..... .....		
Traitement annuel .....		
Nom et titre du supérieur hiérarchique ..... .....		
Nom et titre du fonctionnaire de l'UNESCO homologue du candidat (s'il y a lieu) ..... .....		

### C. But de la bourse

#### Nature des études demandées

Définir le domaine d'étude et les sujets particuliers de spécialisation  	Les études doivent-elles être sanctionnées par un diplôme ou une attestation de connaissance ou prendre une orientation pratique et appliquée ?
Le programme comprend-t-il la soutenance d'une thèse ou des travaux de recherche ? Suppose-t-il l'acquisition d'un équipement particulier pour l'usage du boursier ?	

#### Lieu(x) d'étude

Énumérer par ordre de préférence les pays d'étude demandés. Indiquer sous chaque nom de pays vos préférences éventuelles en ce qui concerne les institutions d'enseignement où les études pourraient être entreprises

1. ..... 2. ..... 3. ....  
           et/ou                                et/ou

(autres pays)

Quelles sont les raisons pour lesquelles les institutions ci-dessus ont été mentionnées ?

Indiquer d'éventuels contacts avec ces institutions et joindre la confirmation d'inscription, si celle-ci est disponible.

**IMPORTANT** : Les contacts ultérieurs avec ces institutions, s'ils ont trait à la bourse demandée, doivent être pris par l'entremise de l'UNESCO

## Informations détaillées sur les études demandées

(Si nécessaire, attacher une feuille supplémentaire)

Donner des détails précis sur la nature des connaissances qui doivent être acquises au cours de la bourse

Donner une estimation réaliste du budget à prévoir pour la bourse demandée (voyage aller-retour, allocation mensuelle, frais d'études, etc.)

## Résultats escomptés et fonctions futures

Indiquer comment il est envisagé de tirer le meilleur parti des résultats obtenus et définir la fonction qui sera exercée à la fin de la bourse, en décrivant les responsabilités futures.

## Déclaration du candidat

Si l'UNESCO m'attribue une bourse, je m'engage à occuper, à la fin de cette bourse, le poste qui me sera assigné, conformément aux informations données ci-dessus. Je certifie que les informations que j'ai fournies sont complètes et exactes.

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Signature du candidat



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

DEMANDE DE BOURSE

**CERTIFICAT DE CONNAISSANCES LINGUISTIQUES**

Nom du candidat..... .....	Langue.....
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Adresse du candidat.....  
.....

(1) APTITUDE À COMPRENDRE

- a) Comprend sans peine quand on lui parle à une cadence normale.....
- b) Comprend presque tout quand on lui parle lentement et distinctement.....
- c) Doit faire répéter et/ou traduire un grand nombre de mots ou d'expressions.....
- d) Ne comprend pas la langue parlée.....

(2) APTITUDE À PARLER

- a) Parle couramment, correctement, et se fait comprendre sans peine.....
- b) Se fait comprendre, mais ne parle par couramment ni de manière absolument correcte.....
- c) Hésite en parlant et cherche souvent ses mots.....

(3) APTITUDE À ÉCRIRE

- a) Écrit facilement et correctement.....
- b) Écrit lentement et/ou commet certaines erreurs.....
- c) Écrit difficilement et fait de nombreuses fautes.....

(4) APTITUDE À LIRE ET À COMPRENDRE LES TEXTES

- a) Lit couramment et comprend tout ce qu'il lit.....
- b) Lit lentement, mais comprend presque tout ce qu'il lit.....
- c) Lit difficilement, et doit souvent avoir recours au dictionnaire.....
- d) Incapable de lire.....

(5) VOCABULAIRE TECHNIQUE

Certains boursiers ont besoin de connaître un vocabulaire technique ou spécialisé. Le cas échéant, évaluez les aptitudes que le candidat possède à cet égard dans les domaines visés aux rubriques 1, 2 et 4 ci-dessus.

(6) Veuillez fournir sur les connaissances linguistiques du candidat, toutes autres précisions qui peuvent présenter de l'intérêt pour la mise au point de son programme d'études :

EXAMINATEUR	Adresse : .....
Nom : .....	.....
Qualité : .....	.....
.....	Date : .....

OBSERVATIONS : .....

.....

.....

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