

52nd ISM Presidium Meeting

Meeting Minutes

7-8 July 2025, Krakow, Poland.

1. Call to order

- Welcome Address by President of the Polish Committee of the ISM Prof. Ryszard Hejmanowski (6th of July 2025)
- ISM President, Prof. Hendrik Grobler, called to order the regular meeting of the ISM Presidium on 7 July 2025 at 8am-12am (1st Part) and 8 July 2025 at 8am-12am (2nd Part) at the AGH University of Cracow, Poland. Prof. Hendrik Grobler welcomed all attendees and thanked them for coming to Poland. He also expressed special thanks to the AGH University of Krakow, Poland hosting this event.

2. Roll call

The original signed list of attendees is included as the Attachment 1.

3. Apologies for absence

Prof. Agnes Malinowska and Dr. Yang Yongjun advised about ISM members who had provided apologies for absence at the meeting. The list of apologies includes:

Name	Affiliation	Country	Apologies
Edmond Hoxha	Polytechnic University of Tirana, Faculty of Geology and Mine	Albania	Problems with online connection
Simit Raval	UNSW SYDNEY NSW AUSTRALIA	Australia	Another commitment
Zheng Nanshan	China University of Mining and Technology	China	Another commitment
Wang Lei	Anhui University of Science and Technology	China	Another commitment
Jiang Yan	Shandong University of Science and Technology	China	Another commitment
Wang Jian	Shandong University of Science and Technology	China	Another commitment
Shi Zhen	Chang'an University	China	Another commitment
Yang Zefa	Central South University	China	Another commitment
Lin Hui	Beibu Gulf University	China	Another commitment
Qin Kai	China University of Mining and Technology	China	Visa Problems

Li Jing	China University of Mining and Technology (Beijing)	China	Personal reasons
Sayyidjabbor Sayyidkosimov	The Tashkent State Technical University	Uzbekistan	Visa Problems, online
Nason Adero	Kenya Mine Surveying	Kenya	Another commitment, online
Gumbie Munesu Stewart	Zimbabwe Mine Surveying	Zimbabwe	Another commitment, online

4. Acceptance of Agenda

Attendees accepted the proposed Meeting's Agenda as in the Attachment 2.

5. Obituaries

No obituaries.

6. Review of the last Presidium Meeting

The 51st Presidium Meeting in Paarl, South Africa.

Minutes still under discussion regarding following topics:

Approval of Seeds Commission, overlapping field of expertise with other commissions.

Voting rights of Coordination Division Members (no voting rights, overlapping positions).

Working groups establishment under commissions rules (obligatory information delivery to the President and Commissions Chairs)

7. Report on preparations for the International Congress of the XIX (19th) ISM to be held in South Africa in 2026

The flyer of 19th International Congress for Mine Surveying has been shared at <https://www.ism-minesurveying.com/article/item/178>.

8. Presentations by ISM Commissions Chairs, Co-Chair, or Secretary

8.1. Commission 1 Education, history, laws, and regulations related to mine surveying

Chair – Bian Zhengfu give the progress report.

8.2. Commission 2 Mineral Reserves and resource management

Chair – Frederick Cawood gives the progress report.

8.3. Commission 3 Measurement techniques and instruments, equipment, graphics etc.

Chair – Jörg Benndorf gives the progress report online.

8.4. Commission 4 Mining damage, Deformation monitoring, rock formation.

Chair – Ryszard Hejmanowski and the Polish national representative – Agnieszka Malinowska gives the progress report. Co-Chair – Dai Huayang present the meeting and participate the discussion.

8.5. Commission 5 Environmental planning, monitoring and restoration.

Chair – Simit Raval provide the progress report. Australia representative-national delegate – Chris Moy presents the meeting and participate the discussion.

8.6. Commission 6 Mine closure, underground space, economic transformation, and sustainability.

Chair – Zou Youfeng and Secretary Liu Changhua give the progress report.

8.7. Seed commission.

Chair – Zheng Kefei give the progress report.

The annual report of each commission can be found from the ISM Website at <https://www.ism-minesurveying.com/>

9. Information regarding national events of interest to minerals surveyors (all Presidium Members)

9.1. Australia

9.2. China

9.3. Czech Republic

9.4. Germany

9.5. Hungary

9.6. Kenya

9.7. Poland

Mining Surveyors Conference/ every two years (October 2025)

9.8. Slovakia

9.9. South Africa

9.10. Uzbekistan

9.11. Zimbabwe

10. National reports from member counties

10.1. Australia, Australia representative-national delegate – Chris Moy presents the report.

10.2. China, China representative-national delegate – Huang Leting and the Chair of ISM Commission 1 – Bian Zhengfu presents the report.

10.3. Czech Republic, Czech Republic representative-national delegate – Miroslav Novosad presents the report.

10.4. Germany, Germany representative-national delegate – Axel Preuße presents the report.

10.5. Hungary, Hungary representative-national delegate – István Havasi presents the report.

10.6. Kenya, Nashon Adero presents the report.

10.6. Poland, Polish representative-national delegate – Agnieszka Malinowska presents the report.

10.7. Slovakia, Slovakia representative-national delegate – Ľudovít Kovanič presents the report.

10.8. South Africa, President of the Institute of Mine Surveyors of South Africa – Mr. T. Tsotetsi presents the report.

10.9. Uzbekistan, Abdurauf Abdukodirov, on the behalf of Prof. Sayyidjabbor Sayyidkosimov, presents the report.

10.10. Zimbabwe, President - Association of Mine Surveyors of Zimbabwe, Gumbie Munesu Stewart, send the report to the organizer.

Some of the reports of member counties can be found from in the attachments.

11. Nomination and confirmation of new ISM Commission Members

According to the ISM statutes, each presidium meeting will annually review, nominate, and confirm new members, including presidium members, sponsoring members, national members, regular members of each commission, and commission leaders.

Only when the applicant or nominated person the presidium meeting offline and give self-introduction, will they be confirmed and issued a certificate with the ISM stamp and the ISM President's signature.

The new ISM Commission Members nominated or confirmed are listed in the table below.

No.	Name	Affiliation	Position	Statues
1	Jan Blachowski	Wroclaw University of Science and Technology, Poland	Co-Chair of Commission 1	Confirmed
2	Li Jing	TU Bergakademie Freiberg	Secretary of Commission 3	Confirmed
3	Agnieszka Malinowska	AGH University of Krakow	Co-Chair of Commission 3	Nominated
4	Liu Changhua	Henan Polytechnic University	Secretary of Commission 6	Confirmed
5	Alexandra Barbarica	Montanuniversität Leoben	Member	Nominated
6	Gumbie Munesu Stewart	Association of Mine Surveyors of Zimbabwe	Member, Zimbabwe representative-national delegate	Nominated
7	Nashon Adero	Kenya Chamber of Mines	Member of Commission 4	Confirmed

8	Sławomir Bojarczuk	LZW Bogdanka S.A., Poland	Member of Commission 4	Nominated
9	Damian Kurdek	K.S. Kłodawa, Poland	Member of Commission 4	Nominated
10	Bartosz Stypiński	LZW Bogdanka S.A., Poland	Member of Commission 4	Nominated
11	Bao Nisha	Northeastern University	Member	Confirmed
12	Abdurauif Abdukodirov	TU Bergakademie Freiberg	Member	Confirmed
13	Ľudovít Kovanič	Technical University of Kosice	Member, Slovakia representative-national delegate	Confirmed
14	Karsten Zimmermann	DMT GmbH & Co. KG	Member of ISM Commission 3	Confirmed

12. Report on Activity of ISM Coordination Division

Report of Coordination Division presented by Dr Yang Yongjun.

-UNESCO contact regarding ISM Activity. Prof. Bian Zhengfu and China Delegation meet with UNESCO representative in Paris 5th of July discussing the reactivation ISM as NGO under auspices of UNESCO. The specific requirement has been defined to fulfill to become NGO. President Hendrik Grobler underlined that every activity done in the name of ISM must be agreed in advance with President.

- Coordination Division is still open for continental representatives.

Prof. Anna Chrzanowski (Canada) was accepted as North America Representative.

General Items

- a. Young members to attend as co-representatives
- b. Aging mine survey profile
- c. Marketing and definition of Mine Surveying for prospective students
- d. Recognition of long-time members

13. Report on the progress of preparations for future ISM Congresses

Prof. Hendrik Grobler, from the University of Johannesburg, provided status of early preparations for ISM Congress 2026, which will be held in Cape Town in South Africa 22-25 October 2026.

14. New bid for future Congress

Prof. Sayyidjabbor Sayyidkosimov from Uzbekistan confirmed interest of the 20th International Congress for Mine Surveying in 2029. Taking into account existence of only one bid for organization of the Congress in 2029, the bid from Uzbekistan was accepted with

condition that Uzbekistan should submit formal bid (including the reason for hosting the congress, expected outcome, commitment, approval from the host countries or other authority, hosts, organizing committee, president and his secretary, place, time, register fee, main activities and program, contact) to executive presidium before the end of 2023. The Bids has been delivered to executive presidium.

15. Confirmation of future Presidium Meetings

2027 – Uzbekistan will hold the ISM Presidium Meeting.

16. The discussion of seed commissions

To meet the rapid development of mine surveying technology, seed commissions were discussed (during 50 Presidium Meeting in China) to be established based on the development of international mine surveying technology, focusing on new professional fields such as *remote sensing*, *space mining* and *underground space*.

The members of the ISM do not agree with the statement of Seed commission that remote sensing and underground space is not applied by other commissions. So, these field is overlapping with other commissions and not should be filed of exceptional research of Seed Commission. The Space mining is the only subject which is covered by other existing commissions. Activity of Seed Commission still not be accepted. In status of ISM there is a statement that under ISM are 6 commission. Activity of Seed commission can we considered as working group with no vote rights.

17. International Scientific Seminar “Mining Surveying and Geohazards: Current Trends and Future Directions”

There are a total of 14 academic reports focusing on topics such as mining subsidence, surface deformation measurement, utilization of abandoned mines, mine surveying education, hyperspectral remote sensing, and space mining. The attendees enthusiastically discussed these cutting-edge topics.

No.	Name	Speech
1	Dai Huayang	Coal mine high-intensity mining subsidence and environmental impact
2	Bao Nisha	Estimating and mapping tailings properties of the largest iron cluster in China for resource potential and reuse
3	Yuan Zhanliang	AI Enables Surveying and Mapping Engineering Professional Development and Talent Education
4	Lian Xugang	Research on the prediction model of residual subsidence in mining areas using GNSS and InSAR monitoring
5	Jörg Benndorf	A Geomatic Framework for Managing Ground Movement related Impacts for UGS
6	Bian Zhengfu	The key technologies for underground pumping storage by using abandoned coal mines
7	Elmira Orynassarova	Exploring Geospatial Innovations: A Review of Remote Sensing and GIS Projects in the Satbayev University Environment

8	Zou Youfeng	Deformation Mechanism and Prevention of High Speed Railway Roadbed in Goaf Site of Qinshui Coal Field
9	Nason Adero	Integrating System Dynamics into Mine Planning: Lessons on Spatial Scale and Multisectoral Linkages from Kenya
10	Zhang Kefei	Geospatial for Space Resources Exploration and Exploitation - A New Territory of Geodesy and Surveying
11	Grobler, Cawood	Mine Surveyors Education in SA
12	Liu Changhua	Progress and Research Hotspots of Mining Surveying Technology in China
13	Sayyidjabbor Sayyidkosimov	Forecasting the stability of preparatory mining operations during underground mining of ore deposits based on static models of rock collapses in space and time
14	Yan Yueguan	Surface Movement Law and Village Protection Coal Pillar Design Technology under Thick Alluvial Layer in Kailuan Mining Area
15	Karsten Zimmermann	DMT SAFEGUARD monitoring services
16	Cai Lailiang	New Technology of Mining Subsidence Monitoring and Prediction

18. Preparation of 20th International Congress for Mine Surveying

M.Sc. Abdurauf Abdukodirov: Introduction to the preparations for the ISM Congress 2029 to be hosted in Uzbekistan.

19. Miscellaneous

20. Closure of the meeting

Meeting was closed 8th of July 2025 at 12:00pm.

Draft of minutes prepared by Agnieszka Malinowska from ISM Coordination Division/ ISM Poland Representative, European ISM Coordination and Prof. Ryszard Hejmanowski Chair of IV ISM Commission, Chair of Polish Committee of Mine Surveyors. Dr. Yang Yongjun from ISM Coordination Division also prepared part of the minutes.

52ND PRESIDIUM MEETING OF THE ISM 2025 CRACOW, POLAND



Invitation

The Polish Society for Mine Surveying warmly extends an invitation to the members of the ISM Presidium to attend the **52nd Presidium of the ISM** in Poland, jointly held with an **International Scientific Seminar** and a **field tour to the Wieliczka Salt Mine** (from the perspective of a mine surveyor).

Date: 6th to 8th of July, 2025.

We look forward to your participation in this exciting and informative event.



AGH UNIVERSITY
OF KRAKOW



POLISH SOCIETY
FOR MINE
SURVEYING



WIELICZKA SALT
MINE

When:

- 6th to 8th of July 2025

Where:

Cracow, Wieliczka,
Poland

How:

- 1 day – welcome in Cracow/Comissions Meetings
- 2 day - Presidium Meeting I part/ /Academic Seminar
- 3 day Presidium Meeting II part/ Field Trip

AGH UNIVERSITY OF KRAKOW

al. Adama Mickiewicza
30, 30-059 Kraków,
Poland



52nd ISM PRESIDUM MEETING 2025

AGH UNIVERSITY OF KRAKOW, POLAND

6-8 JULY 2025

ORGANIZER

Hosted by: AGH University of Krakow, Poland

Hosted by: Polish Committee of International Society for Mine Surveying

Program

Sunday 6th July

<u>Time</u>	<u>Activity</u>										
<u>14:00-15:30</u>	<u>Academic Chinese Session</u> (1 st floor of Building C-7, Room 1.13 , AGH University of Krakow, ul. Czarnowiejska 36, Kraków) 										
14:00-14:30	Attendees Gathering										
	<table> <tr> <th>Speaker</th><th>Title</th></tr> <tr> <td>14:30-14:45 Dai Huayang</td><td><i>Coal mine high-intensity mining subsidence and environmental impact</i></td></tr> <tr> <td>14:45-15:00 Bao Nisha</td><td><i>Estimating and mapping tailings properties of the largest iron cluster in China for resource potential and reuse</i></td></tr> <tr> <td>15:00-15:15 Yuan Zhanliang</td><td><i>AI Enables Surveying and Mapping Engineering Professional Development and Talent Education</i></td></tr> <tr> <td>15:15-15:30 Lian Xugang</td><td><i>Research on the prediction model of residual subsidence in mining areas using GNSS and InSAR monitoring</i></td></tr> </table>	Speaker	Title	14:30-14:45 Dai Huayang	<i>Coal mine high-intensity mining subsidence and environmental impact</i>	14:45-15:00 Bao Nisha	<i>Estimating and mapping tailings properties of the largest iron cluster in China for resource potential and reuse</i>	15:00-15:15 Yuan Zhanliang	<i>AI Enables Surveying and Mapping Engineering Professional Development and Talent Education</i>	15:15-15:30 Lian Xugang	<i>Research on the prediction model of residual subsidence in mining areas using GNSS and InSAR monitoring</i>
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15:30-16:30	Welcome at AGH University of Krakow (1 st floor of Building C-7, Room 1.13 , AGH University of Krakow, ul. Czarnowiejska 36, Kraków)	
16:30 -17:45	Exploring Cracow – trip around Kraków Old Town and Kazimierz Jewish Quartier with electric car (Departure at 16:30 , meeting point in the front of Building C-4 , AGH University of Krakow, Al. Mickiewicza 30, Kraków, arrival at 17:45 Café Orangeria ul. Kossaka 1, Kraków)	
18:00-20:00	Ice Breaker Meeting (Kossak – Café Orangeria, ul. Kossaka 1, Kraków)	



Monday 7th July

<u>Time</u>	<u>Activity</u>													
8:00 – 10:30	Registration and payment at AGH University of Krakow, (1 st floor of Building C-4, Room 111, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków)													
8:00-8:15	Welcome Address by President of the Polish Committee of the ISM (1 st floor of Building C-7, Room 1.13, AGH University of Krakow, ul. Czarnowiejska 36, Kraków)													
8:15-10:00	Presidium Meeting - Day 1: Session 1 (1 st floor of Building C-7, Room 1.13, AGH University of Krakow, ul. Czarnowiejska 36, Kraków)													
10:00 -10:30	Coffee and Snack Break, (1 st floor of Building C-4, Room 111, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków)													
10:30-12:00	Presidium Meeting - Day 1: Session 2 (1 st floor of Building C-7, Room 1.13, AGH University of Krakow, ul. Czarnowiejska 36, Kraków)													
12:30-13:30	Lunch (3 rd floor of Building C-4, Room 302, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków)													
14:00-15:30	International Scientific Seminar (3rd floor of Building C-4, Room 301, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) Mining Surveying and Geohazards: Current Trends and Future Directions <u>Session 1 - Integrating Geospatial Technologies</u> <table><thead><tr><th>Speaker</th><th>Title</th></tr></thead><tbody><tr><td>14:00-14:15</td><td>Jörg Benndorf A Geomatic Framework for Managing Ground Movement related Impacts for UGS</td></tr><tr><td>14:15-14:30</td><td>Bian Zhengfu The key technologies for underground pumping storage by using abandoned coal mines</td></tr><tr><td>14:30-14:45</td><td>Zou Youfeng Deformation Mechanism and Prevention of High Speed Railway Roadbed in Goaf Site of Qinshui Coal Field</td></tr><tr><td>14:45-15:00</td><td>Cai Lailiang New Technology of Mining Subsidence Monitoring and Prediction</td></tr><tr><td>15:00-15:15</td><td>Zhang Kefei Geospatial for Space Resources Exploration and Exploitation - A New Territory of Geodesy and Surveying</td></tr></tbody></table>	Speaker	Title	14:00-14:15	Jörg Benndorf A Geomatic Framework for Managing Ground Movement related Impacts for UGS	14:15-14:30	Bian Zhengfu The key technologies for underground pumping storage by using abandoned coal mines	14:30-14:45	Zou Youfeng Deformation Mechanism and Prevention of High Speed Railway Roadbed in Goaf Site of Qinshui Coal Field	14:45-15:00	Cai Lailiang New Technology of Mining Subsidence Monitoring and Prediction	15:00-15:15	Zhang Kefei Geospatial for Space Resources Exploration and Exploitation - A New Territory of Geodesy and Surveying	
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15:30-16:00	Coffee and Snack Break (3 rd floor of Building C-4, Room 302 , AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) 
16:00-17:30	International Scientific Seminar (3 rd floor of Building C-4, Room 301 , AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków)  Mining Surveying and Geohazards: Current Trends and Future Directions <u>Session 2 Geohazard Mitigation Strategies: From Theory to Practice</u>
16:00-16:15	Hendrik Grobler, Frederik Cawood <i>Mine Survey Practice in South Africa and Considerations for Survey Education and Training for the Future</i>
16:15-16:30	Liu Changhua <i>Progress and Research Hotspots of Mining Surveying Technology in China</i>
16:30-16:45	Sayyidjabbor Sayyidkosimov <i>Forecasting the stability of preparatory mining operations during underground mining of ore deposits based on static models of rock collapses in space and time</i>
16:45-17:00	Yan Yueguan <i>Surface Movement Law and Village Protection Coal Pillar Design Technology under Thick Alluvial Layer in Kailuan Mining Area</i>
17:00-17:15	Robert Dudek, Tomasz Majkusiak <i>novelty in displacement monitoring</i>  Golden Sponsor
17:15-17:30	Karsten Zimmermann <i>DMT SAFEGUARD monitoring services</i>
17:30- 18:00	Discussion - Conference closing
18:00-22:00	Dinner 
18:00-18:30	Kompania Kuflowa (Rynek Główny 3, 30-106 Kraków, Poland) Leaving at 18:30 , meeting point in the front of Building C-4 , AGH University of Krakow, Al. Mickiewicza 30, Kraków. Walk minutes to Kompania Kuflowa, Rynek Główny 3, Kraków
18:30-22:00	Traditional Polish Dinner in traditional Polish Tawern



Tuesday 8th July

<u>Time</u>	<u>Activity</u>	
8:00-9:30	Presidium Meeting - Day 2: Session 1 (1 st floor of Building C-7, Room 1.13 , AGH University of Krakow, ul. Czarnowiejska 36, Kraków)	
9:30 -10:00	Coffee and Snack Break , (1 st floor of Building C-4, Room 111 , AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków)	
10:00-11:30	Presidium Meeting - Day 2: Session 2 (1 st floor of Building C-7, Room 1.13 , AGH University of Krakow, ul. Czarnowiejska 36, Kraków)	
11:30-12:00	Closing of the Presidium meeting/ Group Photo	
12:00-12:30	Finger Lunch (1 st floor of Building C-4, Room 111 , AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków)	
12:30-13:30	Travel to Wieliczka Salt Mine (Departure at 13:30 , meeting point in the front of Building C-4 , AGH University of Krakow, Al. Mickiewicza 30, Kraków)	
13:30-17:00	Wieliczka Salt Mine Visit followed by a Traditional Salty Dinner	
17:00-17:30	Return Travel to Krakow (Arrival at 17:30 , Building C-4 , AGH University of Krakow, Al. Mickiewicza 30, Kraków)	

52nd ISM PRESIDIUM
MEETING 2025



AGH UST KRAKOW, POLAND

6TH-8TH JULY 2025

ADDITIONAL INFORMATION

1. Registration and Payment Information

- **Presidium Meeting and Seminar Fee: 600 EUR** (covers all official events and seminars, meals, trips, do not cover accommodation)
- **Registration Location:**
AGH University of Krakow, Building C4, Room 111
al. Mickiewicza 30, 30-059 Kraków
- **Registration Date & Time:**
7th July 2025, from **8:00 AM to 10:30 AM**
- **Payment Process:**
- **->ONLINE**
 1. **Request an invoice:** Send an email to biuro@mgrzywacz.pl with the subject "ISM 52ND PRESIDIUM MEETING – [Your Surname]"
 2. **Make the payment:** Follow the bank transfer details in the proforma invoice.
 3. **Send payment confirmation:** After completing the transfer, email a copy of the confirmation to biuro@mgrzywacz.pl
 4. **Final invoice:** Once the payment is confirmed, you will receive the final invoice. If attending in person, it will be available at the Registration Desk. If not, it will be mailed after the event.
- **->IN PERSON- BY CASH**

Please prepare **information** like in PARTICIPATION FORM ISM 52ND PRESIDIUM MEETING, KRAKOW, POLAND 2025

 1. Full Name:.....
 2. Company Name:.....
 3. Company Address:.....
 4. Company VAT ID:
 5. Phone:E-mail (for invoice)

2. Venue

- **International Seminar Venue:**

The seminar will be held on the 3rd floor of **Building C-4, Room 301**, AGH University of Krakow, al. Mickiewicza 30, 30-059 Kraków.



- **Presidium Meeting Venues , Welcome at AGH:**

- **Session 1:** Monday, 7th July at 8:00 AM

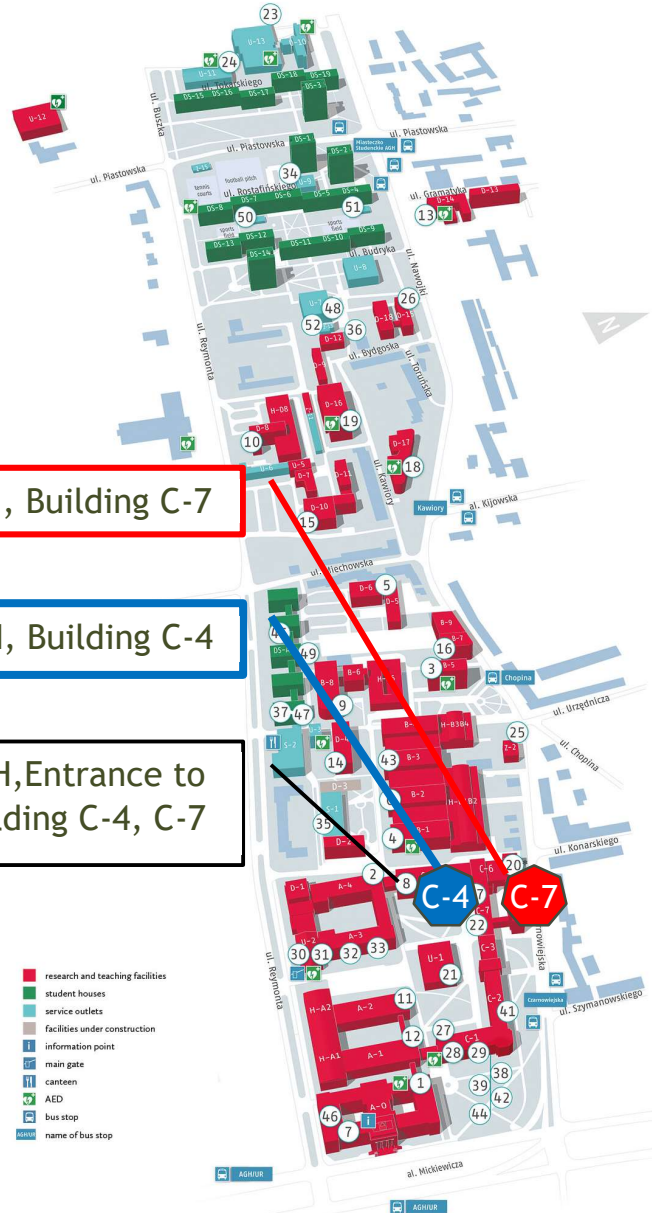
Location: 1st floor of **Building C-7, Room 1.13**, AGH University of Krakow, *ul. Czarnowiejska 36, 30-054 Kraków*

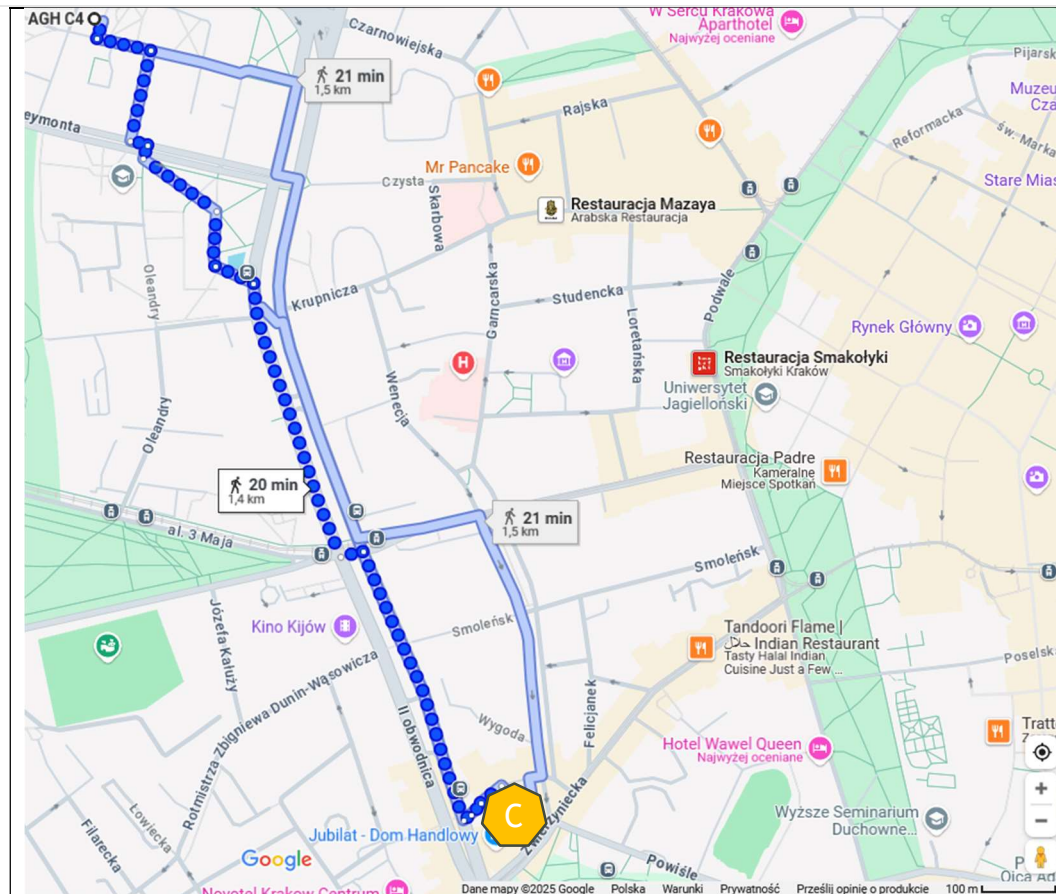


- **Session 2:** Tuesday, 8th July from 8:00 AM to 12:00 PM

Location: 1st floor of **Building C-7, Room 1.13**, AGH University of Krakow, *ul. Czarnowiejska 36 30-054 Kraków*

3. Meals

Event	Map
Coffee, Snacks during Presidium Meeting, Finger Lunch (Monday, Tuesday, 7th-8th July) Location: AGH University of Krakow, 1st floor of Building C4, Room 111, al. Mickiewicza 30, Kraków Coffee, Snacks during Scientific Seminar (Monday, 7th July, 15:30-16:00) Location: AGH University of Krakow, 3rd floor of Building C4, Room 302, al. Mickiewicza 30, Kraków AGH University Campus  AGH, Building C-7 AGH, Building C-4 AGH, Entrance to Building C-4, C-7 1 Rector's Office 2 Faculty of Civil Engineering and Resource Management 3 Faculty of Metals Engineering and Industrial Computer Science 4 Faculty of Electrical Engineering, Automatics, Computer Science, and Biomedical Engineering 5 Faculty of Computer Science, Electronics, and Telecommunications 6 Faculty of Mechanical Engineering and Robotics 7 Faculty of Geology, Geophysics, and Environmental Protection 8 Faculty of Geo-Data Science, Geodesy, and Environmental Engineering 9 Faculty of Materials Science and Ceramics 10 Faculty of Foundry Engineering 11 Faculty of Non-Ferrous Metals 12 Faculty of Drilling, Oil, and Gas 13 Faculty of Management 14 Faculty of Energy and Fuels 15 Faculty of Physics and Applied Computer Science 16 Faculty of Applied Mathematics 17 Faculty of Humanities 18 Faculty of Computer Science 19 Academic Centre for Materials and Nanotechnology 20 Centre of Energy 21 Main Library 22 Department of Foreign Languages 23 Department of Sport and Physical Education 24 AGH University Swimming Pool 25 Centre of e-Learning and Innovative Education 26 Academic Computer Centre Cyfronet 27 IT Sector 28 Centre for Education Affairs 29 Student Affairs Centre 30 UNESCO AGH Chair 31 Admissions Centre 32 Department for International Students 33 AGH University Doctoral School 34 AGH University Student Campus 35 University Board of Student Government 36 Student Construction Centre 37 Careers Centre 38 Technology Transfer Centre 39 Administration and Business Cooperation Department 40 Krakow Centre of Innovative Technologies INNOAGH 41 Centre for Project Management Support 42 Science Support Centre 43 Space Technology Centre 44 Centre for International Affairs 45 Disability Support Office 46 Geological Museum of the Faculty of Geology, Geophysics, and Environmental Protection 47 AGH University Press 48 Academic Cultural Centre Klub STUDIO 49 Student Klub Gwarek 50 Student Klub Zaścianek 51 Student Klub Filutek 52 Recording Studio Kotłownia	C-4
Ice Breaker Meeting (Sunday, 6th July 18:00-20:00) Location: <u>Kossak – Café Orangeria</u> ul. Kossaka 1, 30-106 Kraków, Poland	C



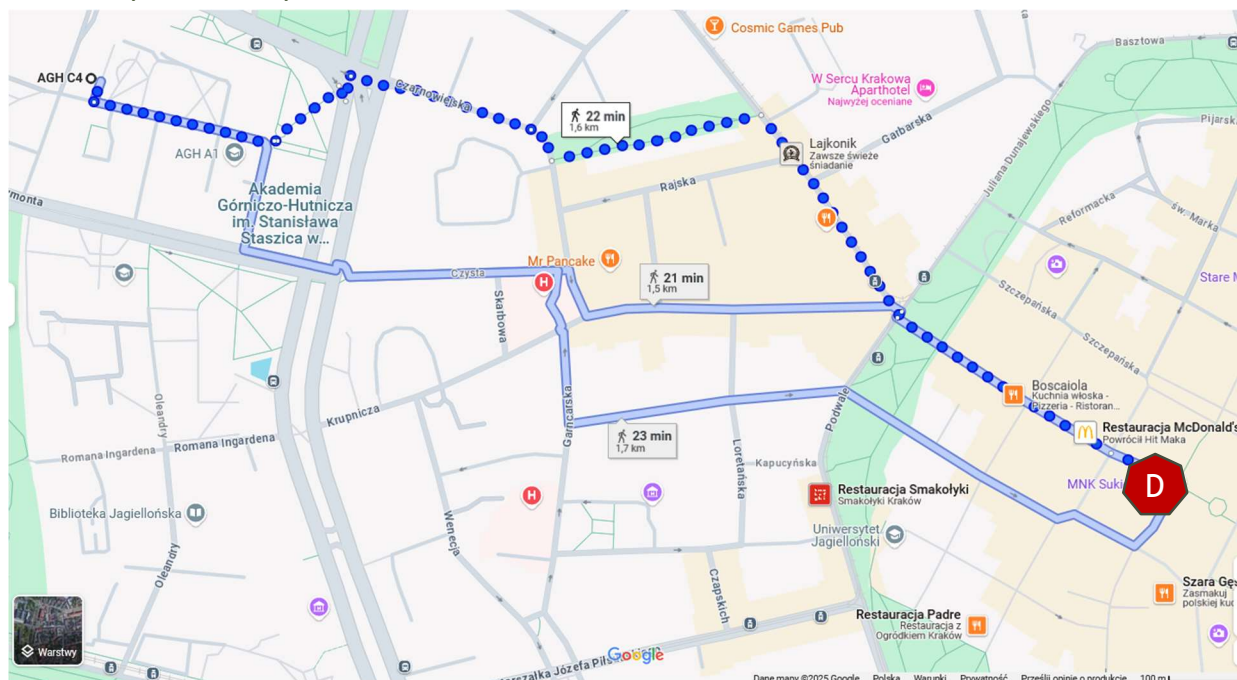
Lunch (Monday, 7th July 12:30-13:30),

Location: AGH University of Krakow, 3rd floor of Building C4, Room 302, al. Mickiewicza 30, Kraków



Dinner (Monday, 7th July 18:30-21:00)

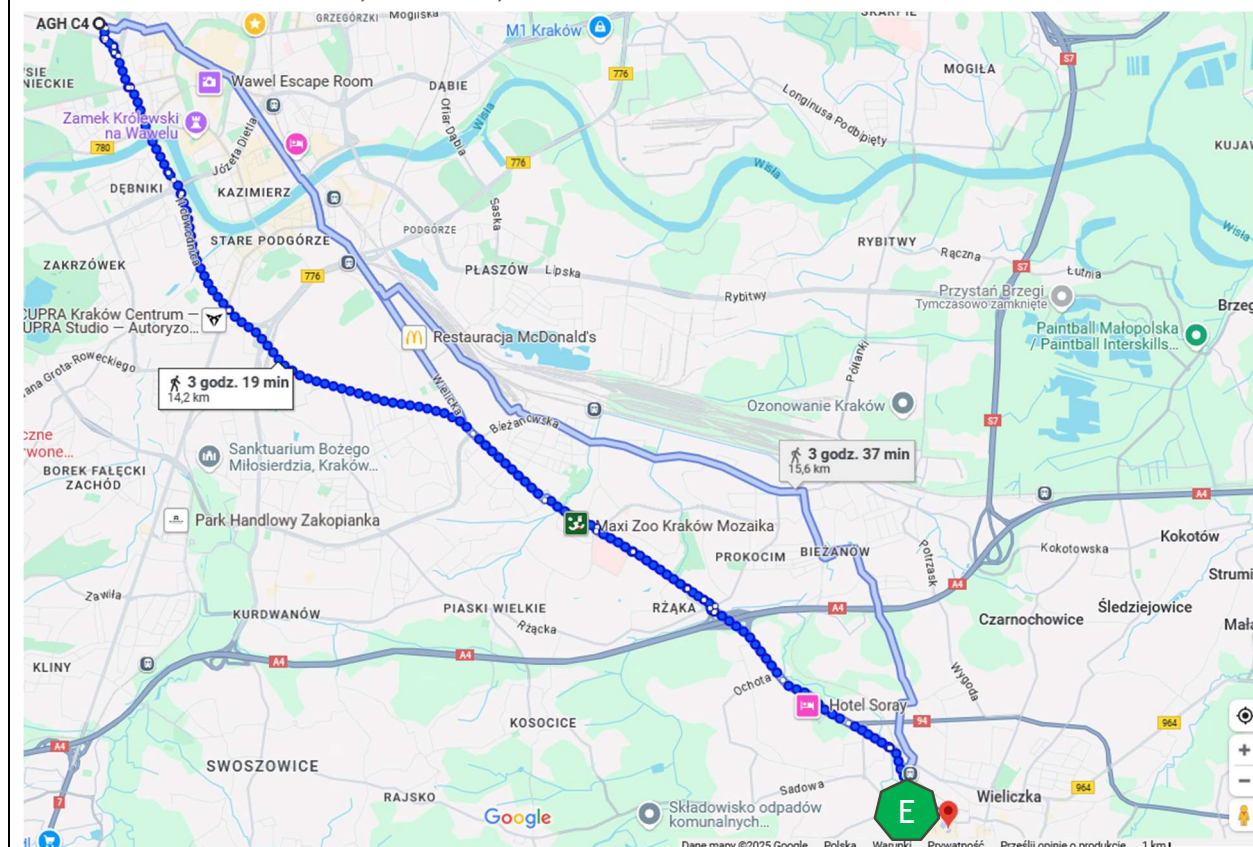
Location: Kompania Kufłowa
Rynek Główny 3, Kraków, Poland



Dinner (Tuesday, 8th July 16:00 - 17:00)

Location: **Wieliczka Salt Mine** - Underground

ul. Daniłowicza 10, Wieliczka, Poland



7. Contact Information

For any inquiries, please reach out to the respective contact persons below:

For any inquiries, please reach out to the respective contact persons below:

- **Registration/Payment/Invoices:**
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- **Publication/Poster/Seminar Session:**
Agnieszka Malinowska amalin@agh.edu.pl

We are happy to assist you with any questions or concerns.

INTERNATIONAL SCIENTIFIC SEMINAR

Mining Surveying and Geohazards: Current Trends and Future Directions

Date: 7th July 2025

Time: 14:00-17:30

Location: 3rd floor of **Building C4**, Aula 301, AGH University of Cracow, al. Mickiewicza 30, 30-059 Kraków, Poland

Seminar Schedule

14:00 - 15:30 *International Scientific Seminar (1st part)*

Session 1: Integrating Geospatial Technologies

Session 1 - Integrating Geospatial Technologies		
Time	Speaker	Title
14:00-14:15	Jörg Benndorf	A Geomatic Framework for Managing Ground Movement related Impacts for UGS
14:15-14:30	Bian Zhengfu	The key technologies for underground pumping storage by using abandoned coal mines
14:30-14:45	Elmira Orynbassarova	Exploring Geospatial Innovations: A Review of Remote Sensing and GIS Projects in the Satbayev University Environment
14:45-15:00	Zou Youfeng	Deformation Mechanism and Prevention of High Speed Railway Roadbed in Goaf Site of Qinshui Coal Field
15:00-15:15	Cai Lailiang	New Technology of Mining Subsidence Monitoring and Prediction
15:15-15:30	Zhang Kefei	Geospatial for Space Resources Exploration and Exploitation - A New Territory of Geodesy and Surveying

15:30 – 16:00

Coffee and Snack Break

16:00 - 17:30 *International Scientific Seminar (1st part)*

Session 2: Geohazard Mitigation Strategies: From Theory to Practice

Session 2 Geohazard Mitigation Strategies: From Theory to Practice		
LP	Speaker	Title
16:00-16:15	Henndri Grobler, Frederick Cawood	Mine Survey Practice in South Africa and Considerations for Survey Education and Training for Future the Future
16:15-16:30	Liu Changhua	Progress and Research Hotspots of Mining Surveying Technology in China
16:30-16:45	Sayyidjabbor Sayyidkosimov	Forecasting the stability of preparatory mining operations during underground mining of ore deposits based on static models of rock collapses in space and time
16:45-17:00	Yan Yueguan	Surface Movement Law and Village Protection Coal Pillar Design Technology under Thick Alluvial Layer in Kailuan Mining Area
17:00-17:15	Robert Dudek, Tomasz Majkusiak	Geotronix - novelty in displacement monitoring
17:15-17:30	Karsten Zimmermann	DMT SAFEGUARD monitoring services

17:30 - 18:00

Closing Remarks & Final Discussion

Venue The seminar will be held on the 3rd floor of **Building C-4**, Aula 301, AGH University of Krakow, al. Mickiewicza 30, 30-059 Kraków.



Australian Mine and Mine Surveying Report
52nd ISM Presidium Meeting, AGH University of Krakow, Poland

1st July 2025

Dear ISM President and Presidium Members

I am honoured to submit my report on the activities and progress of mine surveying in Australia on behalf of the Australian Institute of Mine Surveyors (AIMS).

AIMS remains the premier mine surveying association in Australia with membership figures of 408 as at the end of June 2025.

AIMS continues to host a multi-day annual conference, this year on the Sunshine Coast, Queensland, as well as regional seminars across the country.

AIMS remains heavily involved with candidate workshops and mentoring programs to assist university graduates through the registration process in the regulated states, New South Wales, Queensland and Western Australia.

University enrolments remain reasonably stable with initiatives being undertaken to promote careers in surveying.

Curtin University provides the only mine surveying specific degree available in Australia at the moment with currently approximately 80 enrolments, while other universities offer a generic surveying degree.

Mining in Australia is a significant industry, contributing to the economy and global mineral supply. Australia is one of the world's leading producers of bauxite, iron ore, lithium, gold, lead, diamond, rare earth elements, uranium and zinc.

Chris Moy
AIMS, Fellow

NATIONAL REPORT OF HUNGARY, 2025
52ND ISM PRESIDIUUM MEETING (Dr István HAVASI PhD, Assoc.
Professor, Department Head, University of Miskolc)

Cracow, Poland, 6-8 July 2025

In the frame of the ***Hungarian National Report*** the following topics will be discussed shortly:

1. Training at the Department of Geodesy and Mine Surveying (Faculty of Earth- and Environmental Sciences and Engineering, University of Miskolc).
2. Present situation referring to mine surveying/mine surveyors in Hungary.
3. Professional event(s) which can be connected to Hungarian mine surveying and matters of legal regulation.
4. Production of mineral raw materials in 2024.

1. My department works in the training structure of the Faculty of Earth- and Environmental Sciences and Engineering. At present all the students study in Bologna (BSc, MSc) multi-cycle linear training system either full time or part time schedule. The training time is, in general, 3.5 years for BSc students and 2 years for MSc ones. As far as ***my Department*** is concerned our teaching activity (***1st term of 2024/2025 /bold/ and 2nd term of 2024/2025***) can be seen in Table 1.

Table 1. Bologna training at the ***Department of Geodesy and Mine Surveying*** in the last year

BSC TRAINING		
Subject	Branch	Term/Number of students
<i>Geodesy</i> (2 l + 2 p, 4 credits)	Earth Science and Engineering	autumn (1 st term) 29+23
<i>Mine Surveying</i> (1 l + 2p, 3 credits)	Earth Science and Engineering, Mining and Geotechnical Specialization	autumn (5 th term) 2
Basic knowledge in GIS (2 l + 2 p, 4 credits)	Earth Science and Engineering	spring (2 nd term) <u>24 + 21 + 1</u>
<i>Geodetic basics in GIS</i> (2 l + 2 p, 4 credits)	Environmental Engineering	autumn (1 st term) 22
Mapping (2 l + 2 p, 4 credits)	Geography	spring (2 nd term) <u>10 + 12</u>
<i>Geodesy and GIS</i> (2 l + 2 p, 4 credits)	Geography	autumn (5 th term) 3

Digital mapping (2 p, 2 credits)	Geography	spring (6 th term) <u>4</u>
MSC TRAINING		
Subject	Branch	Term Number of students
GIS (2 l + 2 p, 3 credits)	Petroleum and Natural Gas Engineering; Mining and Geotechnical	autumn (1 st term) 6+3 (part time)
Geodesy and GIS (2 l + 2 p, 4 credits)	Hydro-geological Engineering	autumn (1 st term) 5
Geodesy and GIS (English) (2 l + 2 p, 4 credits)	Earth Science and Hydro- geological Engineering	autumn (1 st term) 13+4
Mine Surveying (part time, 3 credits)	Mining and Geotechnical Engineering	spring (4 st term) 3 (part time)
GIS geodetic data capture procedures	Geoinformatics	autumn (1st term) 2

2.

- On **May the 18th, 2025** there were **242** chartered mine surveyors in Hungary.
- The certificates of **50** chartered mine surveyors are valid for both ***surface and underground mining***.
- There are **40** certificates for ***hydrocarbon special field*** (including the establishment and operation of petroleum, petroleum products, and other hydrocarbon pipe systems with the exception of natural gas as well).
- The number of chartered mine surveyor's certificates for ***surface mining*** issued by the ***Hungarian Mining Bureau*** is: **138. 87 51**
- There are **12** certificates for **both surface mining and hydrocarbon special fields** and **2** ones for **all the three fields**.

3.

- The ***62-nd Conference on Mine Surveying*** was organized ***in Gyöngyös-Sástó*** on ***May 29-31st, 2024***. The main topic was "***Wayfinding in mine surveying***". In the frame of a technical tour ***one of Hungarian opencast lignite mines, in Visonta, and the Visonta Power Station*** were visited by the specialists and guests. At this conference there were about ***60 participants***, and ***12 presentations*** were delivered. There was an extra facultative program as well: drone surveying demonstration in Recsk

mine. Of course, there were other professional, traditional and cultural programmes as well.

- ***The XXII. Forum on Mine Surveying*** was hold in Budapest on ***November the 7th, 2024***. Greetings and introductions: Before the professional debate there were five presentations which were as follows. The first topic was about the “*The necessity of the frequency of mining surveys to avoid fines which may be imposed on mining companies*”. The second one was about the “*The importance of the setting outs within a mining area*”. The third one was about the “*Volume calculations related to planning and excavation*”. The forth one was about the “*Design and construction of track establishments*”. The fifth one was about the “*Information on comments regarding the 2023-2024 mining maps*”.

- ***The legal regulations referring to mine surveying had been modified last time at the beginning of 2022.***

The changes in the content of the previous related legislation were not significant, only minor changes were made due to the new supervisory authority of the mining industry: the ***Supervisory Authority for Regulated Activities*** (SARA, in Hungarian acronym: SZTFH).

At present the most important legislation related to the mine surveying is as follows:

19/2022. (I.28) SZTFH

about the scale and content of mining maps and

4/2022. (I.24) SZTFH

about the chartered mine surveyor.

4.

As far as the production of various mineral raw materials is concerned, data of the last two years can be found in Table 2. Changes in percentage of each material are involved in the last column of Table 2. In connection with ***solid mineral raw materials*** it can be seen that there was a decrease of ***16.3%*** in ***total production***. You can observe a ***larger decrease*** of ***30.6%*** in ***production of coals***, and a ***smaller one*** of ***2.8%*** in case of ***lignite***. The ***production of ores is 0***. The ***peat by 11.0%***, and ***clay increased by 6.9%***. A ***smaller increase*** can be seen in case of ***other materials (1.9%)***, and the

production of *construction materials* also decreased (for **sand** and **gravel** with 2.3%). *Stone mining was increased by 3.5%*. The production of *crude oil increased* with 14.0%, and the *natural gas* increased with 7.4%. There was 5.9 % *increase* in case of *carbon dioxide*. The production of raw materials for a *period of 2016 and 2024* are illustrated in Figures 1 and 2.

Table 2. Comparing the production of mineral raw materials in Hungary considering the last two years

Mineral raw materials	2023 [m ³]	2024 [m ³]
Coals	3 264	2 266 (-30.6%)
Lignite	3 255 945	3 163 488 (-2.8%)
Ores	0	0
Peat	184 811	205 154 (+11.0%)
Clay	792 262	846 955 (+6.9%)
Sand and gravel	18 965 809	18 525 390 (-2.3%)
Stones	8 660 830	8 960 765 (+3.5%)
Other	2 783 998	2 835 937 (+1.9%)
Total [Mm³]	34.65	34.54 (-0.3%)
Crude oil [Mt]	0.93	1.06 (+14.0%)
Natural gas [Gm ³]	1.76	1.89 (+7.4%)
Carbon dioxide [Gm ³]	0.17	0.18 (+5,9%)

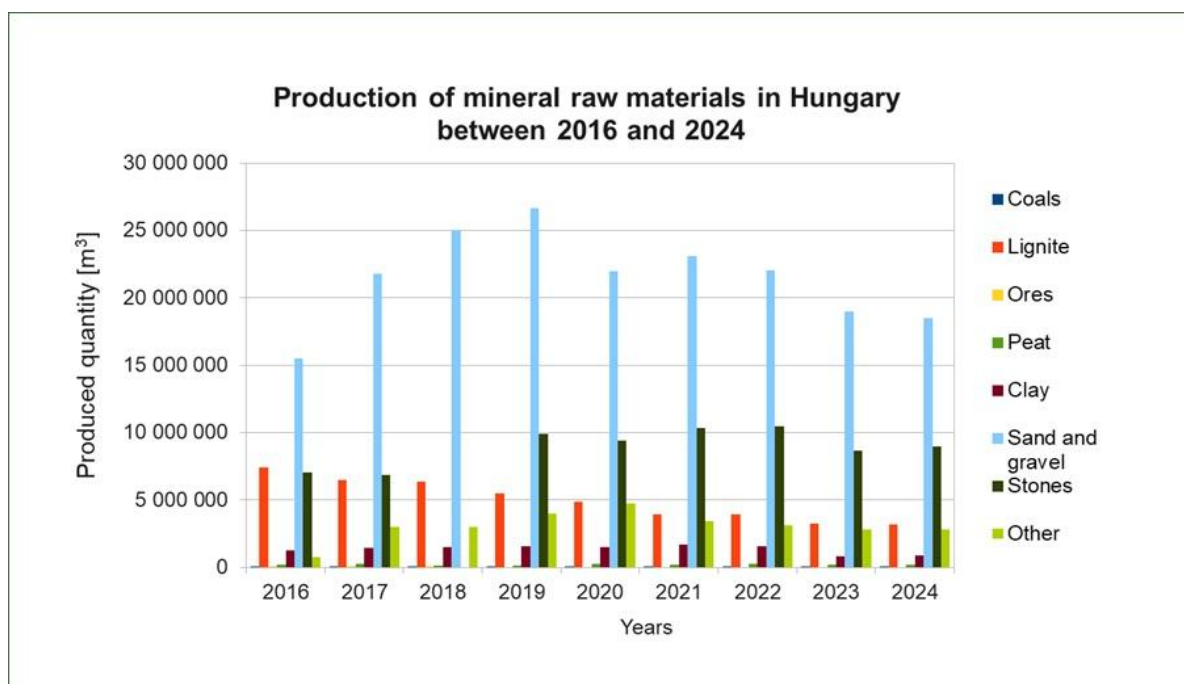


Figure 1. Production of solid raw materials

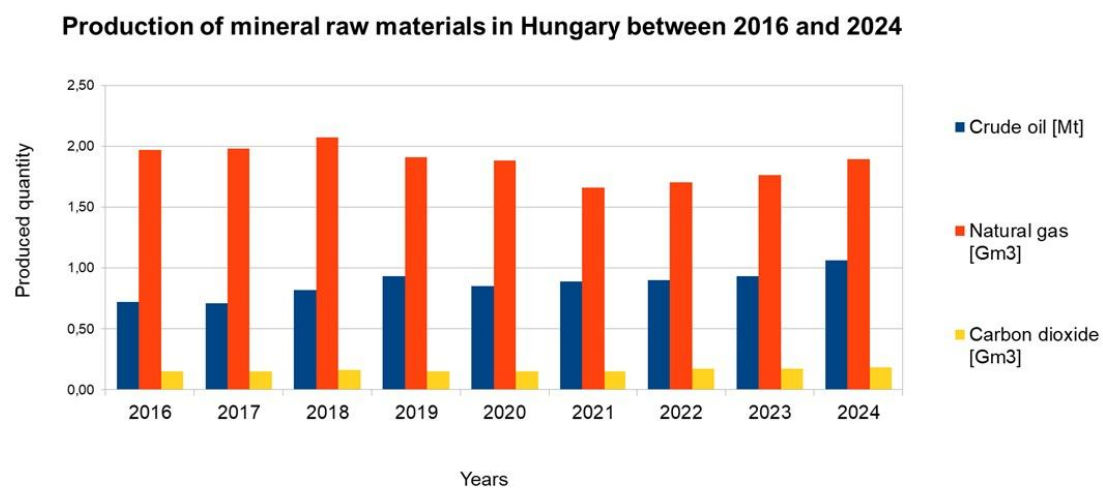


Figure 2. Petroleum and gas production



INTERNATIONAL SOCIETY FOR MINE SURVEYING

52nd Presidium Meeting

6-8 JULY 2025

Polish Report

Polish Committee Mine Surveying Report
52nd ISM Presidium Meeting, AGH University of Krakow, Poland

7th July 2025

Report on Mine Surveying Activities in Poland

On behalf of the Polish Mine Surveying Community

It is with great respect and appreciation that I submit this report outlining the current state and recent advancements in the field of mine surveying in the Republic of Poland.

Mine surveying continues to constitute a fundamental and strategic component of the Polish mining industry. The profession maintains a strong presence across multiple sectors, including underground mining, open-pit operations, salt mining, and energy resource extraction. This standing is firmly rooted in Poland's long-established mining heritage, supported by a rigorous academic foundation and a well-organised professional community.

Polish mine surveyors are active within a network of regional and national platforms that facilitate professional development and knowledge exchange. Among these, the **National Forum of Mine Surveyors** plays a particularly prominent role, providing a platform for collaboration among professionals representing mining enterprises, regulatory authorities, academic institutions, and the private sector.

Formal education in mine surveying is primarily offered at the **AGH University of Krakow**, where the specialised programme *Mine Surveying and Geohazards* continues to attract and educate future professionals. Complementary academic offerings are also provided by other Universities.

Universities in Poland Offering Geodesy / Mine Surveying Education

1. AGH University of Krakow (Akademia Górniczo-Hutnicza im. Stanisława Staszica w Krakowie)

- **Faculty:** Faculty of Geo-Data Science, Geodesy, and Environmental Engineering (WGGiŚ)
- **Specialization (MSc.):** Mine Surveying and Geohazards (Miernictwo i Geozagrożenia)
- **Notes:** This is **Poland's leading institution** for mine surveying, with strong ties to industry, National Mining Authority (WUG), and research on post-mining deformation, GIS, remote sensing, and risk analysis.

2. Wrocław University of Science and Technology (Politechnika Wrocławska)

- **Faculty:** Faculty of Geoengineering, Mining and Geology
- **Program:** Geodesy and Cartography
- **Notes:** Offers elements of **mine surveying**, rock mass deformation, and engineering geodesy.

3. University of Agriculture in Krakow (Uniwersytet Rolniczy im. Hugona Kollątaja w Krakowie)

- **Faculty:** Faculty of Environmental Engineering and Land Surveying

<https://pk-ism.org/>

Al. Adama Mickiewicza 30
30-059 Kraków

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INTERNATIONAL SOCIETY FOR MINE SURVEYING

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Polish Report

- **Program:** Geodesy and Cartography
 - **Notes:** Focus on **environmental and rural geodesy**, with some crossover in mining risk and terrain deformation.
- 4. Silesian University of Technology (Politechnika Śląska w Gliwicach)**
- **Faculty:** Faculty of Civil Engineering
 - **Program:** Geodesy and Cartography
 - **Notes:** Located in Poland's historic mining region; offers engineering geodesy and deformation monitoring.
- 5. University of Warmia and Mazury in Olsztyn (Uniwersytet Warmińsko-Mazurski w Olsztynie)**
- **Faculty:** Faculty of Geoengineering
 - **Program:** Geodesy and Cartography
 - **Notes:** Strong in **GNSS, GIS, and satellite remote sensing** — useful for mining monitoring.
- 6. Warsaw University of Technology (Politechnika Warszawska)**
- **Faculty:** Faculty of Geodesy and Cartography
 - **Program:** Geodesy and Cartography
 - **Notes:** General geodesy focus; offers specialization in engineering and industrial applications.
- 7. Gdańsk University of Technology (Politechnika Gdańska)**
- **Faculty:** Civil and Environmental Engineering
 - **Program:** Geodesy and Cartography
 - **Notes:** Strong in **engineering geodesy**, deformation measurements, and coastal monitoring.
- 8. University of Zielona Góra (Uniwersytet Zielonogórski)**
- **Program:** Geodesy and Cartography
 - **Notes:** Offers regional geodesy education with elements of environmental and mining risk applications.
- 9. Rzeszów University of Technology (Politechnika Rzeszowska)**
- **Faculty:** Faculty of Civil and Environmental Engineering and Architecture
 - **Program:** Geodesy and Cartography
 - **Notes:** Basic and applied geodesy, GIS, and photogrammetry.

✓ Summary:

- **Mine surveying** is most directly taught at **AGH University of Krakow**.
- **Elements of mine or engineering surveying** are included in Wrocław, Gliwice, and Olsztyn.
- **GIS, deformation monitoring, satellite remote sensing**, and geotechnical cooperation appear across many of these universities.

These universities actively engage in collaborative research and training initiatives in partnership with the mining industry, thereby ensuring a continuous pipeline of skilled professionals.

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INTERNATIONAL SOCIETY FOR MINE SURVEYING

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Polish Report

The profession also benefits from close and constructive cooperation with the **Higher Mining Authority (WUG, <https://www.wug.gov.pl/english/about>)**, which oversees regulatory compliance and contributes to the ongoing development of professional standards and qualifications.

Prominent mining companies employing licensed mine surveyors in Poland include: **KGHM Polska Miedź S.A., Jastrzębska Spółka Węglowa S.A., Polska Grupa Górnicza S.A., Lubelski Węgiel "Bogdanka" S.A., Kopalnia Soli Wieliczka S.A., Kopalnia Soli Kłodawa S.A., and Kopalnia Soli Bochnia S.A.** Additional representation comes from energy and infrastructure firms such as **PGE Górnictwo i Energetyka Konwencjonalna S.A. (Bełchatów)** and **Przedsiębiorstwo Budowy Kopalń PeBeKa S.A.**

In alignment with global trends, mine surveying practices in Poland are undergoing dynamic transformation, driven by the implementation of modern technologies. These include unmanned aerial systems (UAVs), terrestrial and mobile laser scanning, satellite remote sensing, and the application of artificial intelligence in spatial data analysis and geotechnical risk assessment — particularly in post-mining and subsidence-prone areas.

The Polish mine surveying community remains fully committed to upholding the highest professional standards, fostering academic excellence, and engaging in active international cooperation in the service of sustainable and safe mining practices worldwide.

Agnieszka Malinowska
Polish Representative

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THE CHAMBER OF MINES



SECRETARIES – THE CHAMBER OF MINES OF ZIMBABWE

8th July 2025

52nd ISM Presidium Meeting, AGH University of Krakow, Poland

Dear ISM President and Presidium Members

On behalf of the Association of Mine Surveyors of Zimbabwe (AMSZ), we are honoured to be invited to this ISM Presidium Meeting. We appreciate this consideration. With your indulgence, I would like to submit this report on the activities and progress in the field of Mine Surveying in Zimbabwe.

1. The Association of Mine Surveyors of Zimbabwe (AMSZ), established in 1985, is a non-profit professional body that represents the country's Mine Surveying profession through a close affiliation with the Chamber of Mines of Zimbabwe and in partnership with the Ministry of Mines and Mining Development. Its core mandate is to advance and uphold the highest standards of accuracy, safety, and ethics in Mine Surveying, and contribute to legislative policies, aimed at enhancing the integrity of mining operations, improving the administration of mining titles, reducing boundary disputes, and supporting the government in effective management of its mineral resources.
2. The AMSZ membership is currently at 396 members as of 30th of June 2025.
3. The AMSZ will hold its 40th Annual General Meeting and Conference on 28th and 29th August 2025, respectively, at the Zimbabwe School of Mines (ZSM) in Bulawayo, under the theme: “*AMSZ @ 40: Surveying the Future – Advancing Data Integrity, Operational Excellence, and Investor Confidence for a Thriving Zimbabwean Mining Sector*”. At this conference, the AMSZ will launch a **Youth Chapter** (hence the strategic choice of venue) aimed at enhancing the representation of students and young surveyors for a robust future of the profession. The AMSZ will also create an **Honorary Committee** to recognise and appreciate the contributions made by veteran Mine Surveyors in the AMSZ's 40 years of existence. Allow me to extend an invitation to this illustrious Institution, the ISM, and its members.
4. The AMSZ organises Quarterly Technical Visits to mining operations for benchmarking and skills exchange, aiming to promote safety through the adoption of sustainable technology, enhance productivity, and share best practices and national policy and legislative developments. These visits also keep members informed about modern surveying technologies and techniques.

5. The Zimbabwe School of Mines (ZSM) is the de facto institution that produces Mine Surveyors in the country, offering National Diplomas and Higher National Diplomas. Enrolment averages 60 students annually. Other tertiary institutions offer related Geographical/Geomatics Degrees and Diplomas, but nothing specific to Mine Surveying. In an AMSZ symposium held at the ZSM (17.05.2024), a resolution was made for the ZSM to develop a specific Mine Surveying Degree to address the existing gap within the country. This is a work-in-progress. The AMSZ continues to collaborate with the ZSM on Mine Surveying Curricula Development workshops. Our government, through the Ministry of Mines and Mining Development, offers the Mine Surveyor's Certificate of Competency, which has been very unpopular among our young generations. Still, the AMSZ has made inroads into reviving this professional registration, initially by reviewing and revising the curriculum to align it with both industry demands, and other prior academic learning offered at Tertiary Institutions.
6. Mining is one of the largest foreign currency earners in Zimbabwe (60% of the nation's total export earnings), with gold production at the centre stage of operations, dominated by informal artisanal, small, and medium-scale miners (ASM). Direct formal mining sector employment is just around 3% of the national workforce. In 2024, these ASM accounted for over 65% of total gold deliveries. The government is now busy with the task of formalising these miners, and the AMSZ has partnered with the Ministry of Mines and Mining Development (MMMD) to gather survey-grade data, facilitating the operationalisation of the computerised Mining Cadastre Information Management System (MCIMS) and supporting the subsequent formalisation processes. This presents long-term opportunities for Mine Surveyors.
7. Zimbabwe has gazetted the **Mines and Minerals Bill (H.B. 1, 2025)**, which was officially gazetted on 25 June 2025. This Bill aims to replace the 1961 Act and modernise the mining sector by introducing measures such as a Mining Cadastre Register, stricter "use it or lose it" policies for mining claims, and provisions for the management of strategic minerals like lithium and rare earth elements. The AMSZ has successfully, as part of ongoing efforts, managed to make submissions that protect the role and relevance of Mine Surveyors, safeguarding it from other engineering disciplines that have, for many years, pilfered a significant number of the Mine Surveyor's responsibilities.

Thank you.

Gumbie Munesu Stewart
President - Association of Mine Surveyors of Zimbabwe (AMSZ)
Zimbabwe Representative