# *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 Kracow, 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 statues, 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 | Abdurauf 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 Orynbassarova | 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.

**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

AGH UNIVERSITY OF KRAKOW

POLISH SOCIETY FOR MINE SURVEYING

WIELICZKA SALT MINE

# 52nd ISM PRESIDIUM 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**

| **Time** | **Activity** |
|---|---|
| **14:00-15:30** | **Academic Chinese Session (**1st floor of **Building C-7, Room 1.13**, AGH University of Krakow, ul. Czarnowiejska 36, Kraków)   |
| **14:00-14:30** | **Attendees Gathering** |
| | **Speaker** *Title* |
| 14:30-14:45 | **Dai Huayang** *Coal mine high-intensity mining subsidence and environmental impact* |
| 14:45-15:00 | **Bao Nisha** *Estimating and mapping tailings properties of the largest iron cluster in China for resource potential and reuse* |
| 15:00-15:15 | **Yuan Zhanliang** *AI Enables Surveying and Mapping Engineering Professional Development and Talent Education* |
| 15:15-15:30 | **Lian Xugang** *Research on the prediction model of residual subsidence in mining areas using GNSS and InSAR monitoring* |

| | |
|---|---|
| **15:30-16:30** | **Welcome at AGH University of Krakow** (1st 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**   <br> **(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**

| Time | Activity |
|---|---|
| **8:00 – 10:30** | **Registration and payment at AGH University of Krakow**, (1st floor of **Building C-4, Room 111,** AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) C-4 |
| **8:00-8:15** | **Welcome Address** by President of the Polish Committee of the ISM (1st floor of **Building C-7, Room 1.13**, AGH University of Krakow, ul. Czarnowiejska 36, Kraków) C-7 |
| **8:15-10:00** | **Presidium Meeting - Day 1: Session 1** (1st floor of **Building C-7, Room 1.13**, AGH University of Krakow, ul. Czarnowiejska 36, Kraków) C-7 |
| **10:00 -10:30** | **Coffee and Snack Break**, (1st floor of **Building C-4, Room 111**, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) C-4 |
| **10:30-12:00** | **Presidium Meeting - Day 1: Session 2** (1st floor of **Building C-7, Room 1.13**, AGH University of Krakow, ul. Czarnowiejska 36, Kraków) C-7 |
| **12:30-13:30** | **Lunch** (3rd floor of **Building C-4, Room 302**, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) C-4 |
| **14:00-15:30** | **International Scientific Seminar** (3rd floor of **Building C-4, Room 301**, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) C-4<br>**Mining Surveying and Geohazards: Current Trends and Future Directions**<br>*Session 1 - Integrating Geospatial Technologies*<br>***Speaker*** — *Title*<br>14:00-14:15 — ***Jörg Benndorf*** — *A Geomatic Framework for Managing Ground Movement related Impacts for UGS*<br>14:15-14:30 — ***Bian Zhengfu*** — *The key technologies for underground pumping storage by using abandoned coal mines*<br>14:30-14:45 — ***Zou Youfeng*** — *Deformation Mechanism and Prevention of High Speed Railway Roadbed in Goaf Site of Qinshui Coal Field*<br>14:45-15:00 — ***Cai Lailiang*** — *New Technology of Mining Subsidence Monitoring and Prediction*<br>15:00-15:15 — ***Zhang Kefei*** — *Geospatial for Space Resources Exploration and Exploitation - A New Territory of Geodesy and Surveying* |

| | |
|---|---|
| **15:30-16:00** | **Coffee and Snack Break** (3rd floor of **Building C-4, Room 302**, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) C-4 |
| **16:00-17:30** | **International Scientific Seminar** (3rd floor of **Building C-4, Room 301**, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) C-4<br>**Mining Surveying and Geohazards: Current Trends and Future Directions**<br>*Session 2 Geohazard Mitigation Strategies: From Theory to Practice* |
| 16:00-16:15 | ***Hendrik Grobler, Frederik Cawood*** *Mine Survey Practice in South Africa and Considerations for Survey Education and Training for 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*** *novelty in displacement monitoring*<br>GEOTRONICS DYSTRYBUCJA *Golden Sponsor* |
| 17:15-17:30 | ***Karsten Zimmermann*** *DMT SAFEGUARD monitoring services* |
| **17:30- 18:00** | **Discussion - Conference closing** |
| **18:00-22:00** | **Dinner** D |
| 18:00-18:30 | **Kompania Kuflowa** *( Rynek Główny 3, 30-106 Kraków, Poland)*<br>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 | |
|---|---|
| **Time** | **Activity** |
| **8:00-9:30** | **Presidium Meeting - Day 2: Session 1** (1st floor of **Building C-7, Room 1.13**, AGH University of Krakow, ul. Czarnowiejska 36, Kraków) C-7 |
| **9:30 -10:00** | **Coffee and Snack Break**, (1st floor of **Building C-4, Room 111**, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) C-4 |
| **10:00-11:30** | **Presidium Meeting - Day 2: Session 2** (1st floor of **Building C-7, Room 1.13**, AGH University of Krakow, ul. Czarnowiejska 36, Kraków) C-7 |
| **11:30-12:00** | **Closing of the Presidium meeting/ Group Photo** |
| **12:00-12:30** | **Finger Lunch** (1st floor of **Building C-4, Room 111**, AGH University of Krakow, ul. Al. Mickiewicza 30, Kraków) C-4 |
| **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 D |
| **17:00-17:30** | **Return Travel to Krakow (**Arrival at **17:30**, **Building C-4**, AGH University of Krakow, Al. Mickiewicza 30, Kraków) C-4 |

**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**

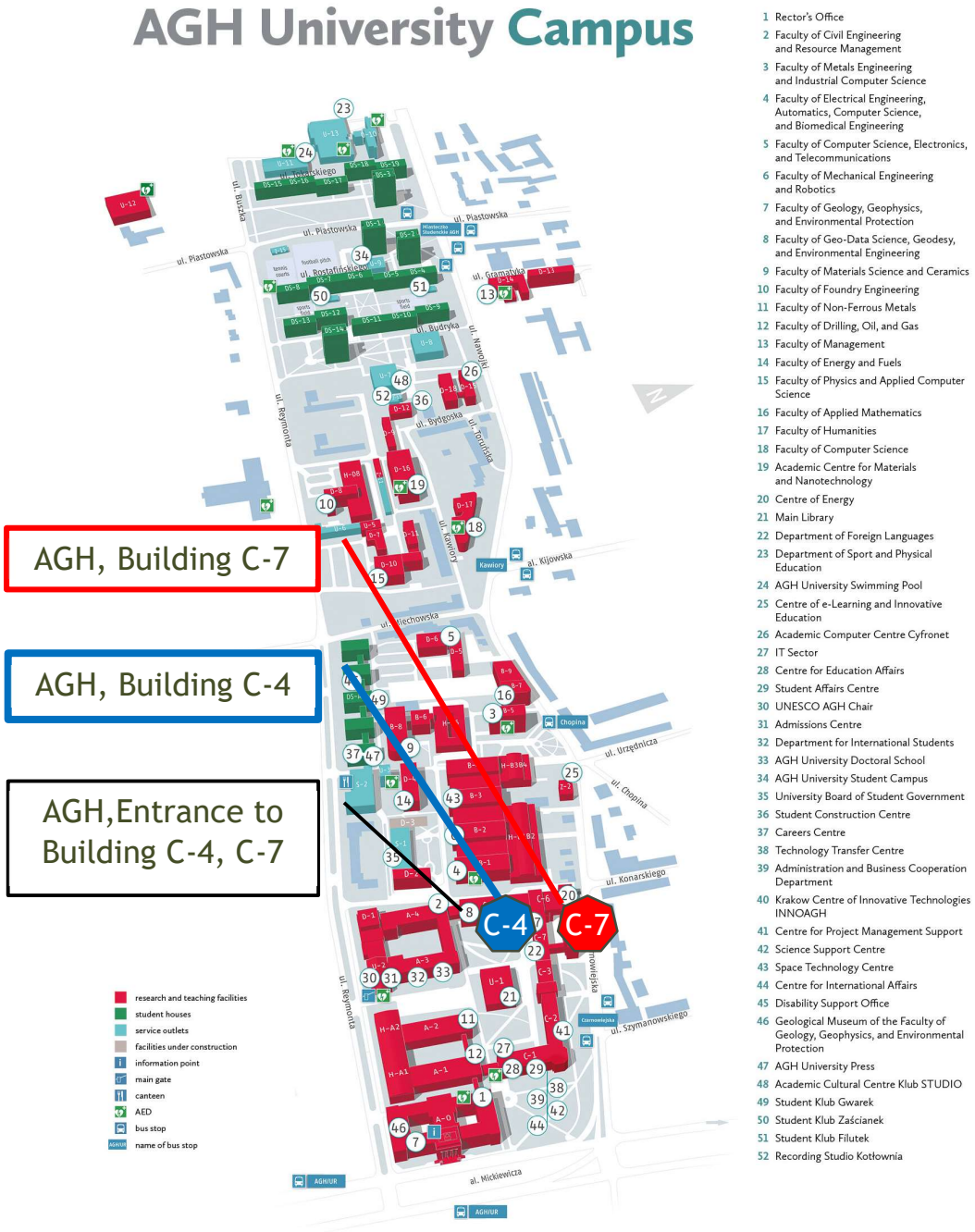
- **International Seminar Venue**:
  The seminar will be held on the 3rd floor of **Building C-4**, **Room 301**, AGH University of Krakow, al. Mickiewicza 30, 30-059 Kraków.

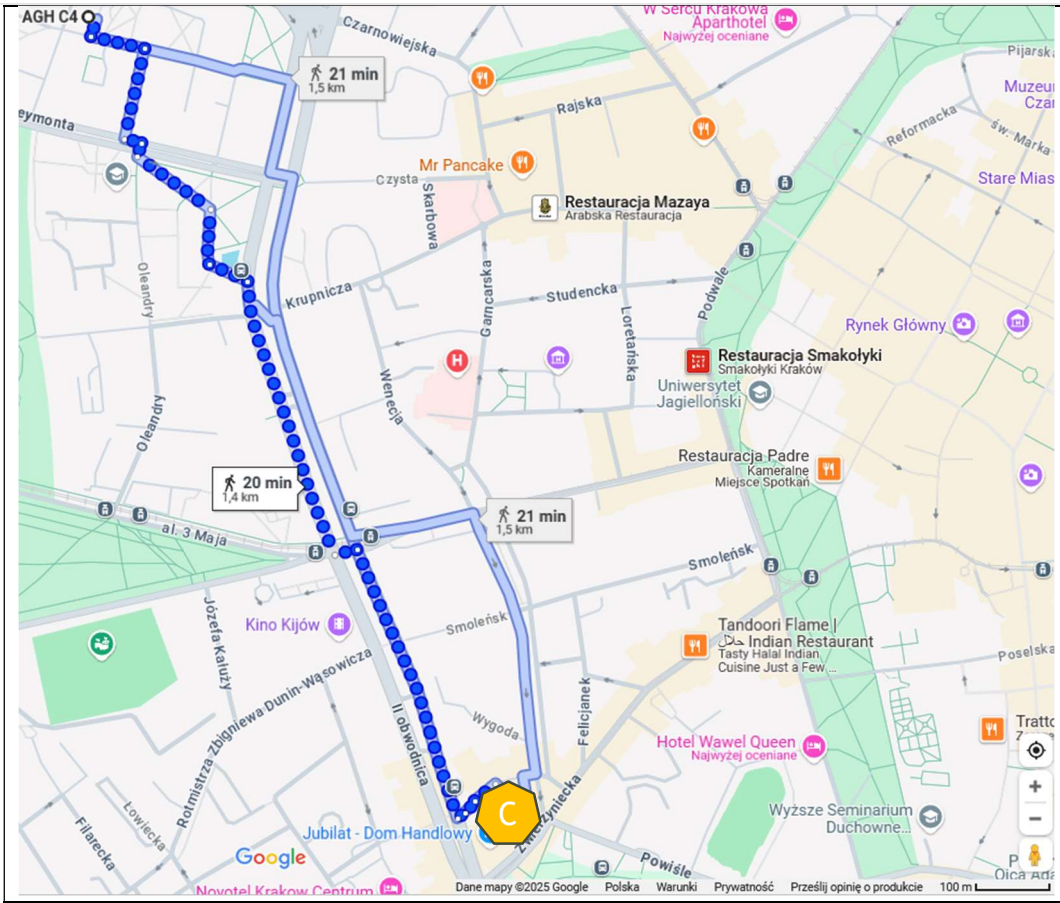



- **Presidium Meeting Venues , Welcome at AGH**:
  - **Session 1**: Monday, 7th July at 8:00 AM
    Location: 1st floor of **Building *C-7*, Room 1.13**, AGH University of Krakow, *ul. Czarnowiejska 36, 30-054 Kraków*
  - **Session 2**: Tuesday, 8th July from 8:00 AM to 12:00 PM
    Location: 1st floor 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)**<br>Location: AGH University of Krakow, **1st floor of Building C4, Room 111**, al. Mickiewicza 30, Kraków<br>**Coffee, Snacks during Scientific Seminar (Monday, 7thJuly, 15:30-16:00)**<br>Location: AGH University of Krakow, **3rd floor of Building C4, Room 302**, al. Mickiewicza 30, Kraków<br><br> | C-4 |
| **Ice Breaker Meeting (Sunday, 6th July 18:00-20:00)**<br>Location: **Kossak – Café Orangeria**<br>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

C-4

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

Location**: Kompania Kuflowa**

Rynek Główny 3, Kraków, Poland

D

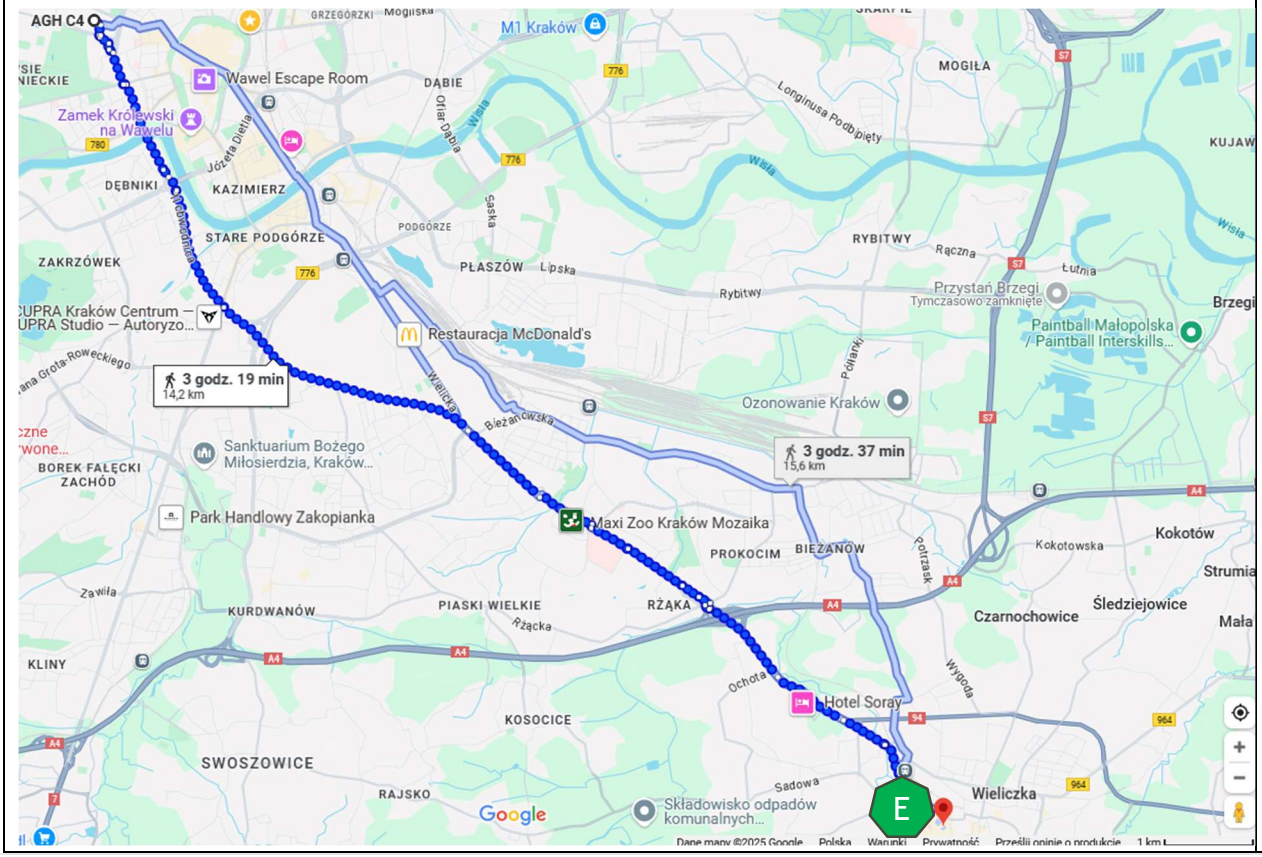


**Dinner (Tuesday, 8th July 16:00 - 17:00)**

Location: **Wieliczka Salt Mine** - Underground

ul. Daniłowicza 10, Wieliczka, Poland

E




## 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**:
  Biuro Małgorzata Grzywacz: **biuro@mgrzywacz.pl**
  Olga Sopata olgsop@agh.edu.pl
- **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<br>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 INSTITUTE OF MINE SURVEYORS

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 PRESIDIUM 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** |
| ***Geodesy*** (2 l + 2 p, 4 credits) | Earth Science and Engineering | autumn (1st term) ***29+23*** |
| ***Mine Surveying*** (1 l + 2p, 3 credits) | Earth Science and Engineering, Mining and Geotechnical Specialization | autumn (5th term) ***2*** |
| Basic knowledge in GIS (2 l + 2 p, 4 credits) | Earth Science and Engineering | spring (2nd term) *24 + 21 + 1* |
| ***Geodetic basics in GIS*** (2 l + 2 p, 4 credits) | Environmental Engineering | autumn (1st term) ***22*** |
| Mapping (2 l + 2 p, 4 credits) | Geography | spring (2nd term) *10 + 12* |
| ***Geodesy and GIS*** (2 l + 2 p, 4 credits) | Geography | autumn (5th term) ***3*** |

| | | |
|---|---|---|
| Digital mapping<br>(2 p, 2 credits) | Geography | spring (6th term)<br>*4* |
| **MSC TRAINING** | | |
| **Subject** | **Branch** | **Term**<br>**Number of students** |
| ***GIS***<br>(2 l + 2 p, 3 credits) | Petroleum and Natural Gas Engineering; Mining and Geotechnical | autumn (1st term)<br>***6+3*** *(part time)* |
| ***Geodesy and GIS***<br>(2 l + 2 p, 4 credits) | Hydro-geological Engineering | autumn (1st term)<br>***5*** |
| ***Geodesy and GIS (English)***<br>(2 l + 2 p, 4 credits) | Earth Science and Hydro-geological Engineering | autumn (1st term)<br>***13+4*** |
| ***Mine Surveying***<br>(part time, 3 credits) | Mining and Geotechnical Engineering | spring (4st term)<br>***3*** *(part time)* |
| ***GIS geodetic data capture procedures*** | Geoinformatics | autumn (1st term)<br>***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 ***S**upervisory **A**uthority for **R**egulated **A**ctivities* (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%***). S***tone 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 [$Mm^3$]*** | ***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%)* |

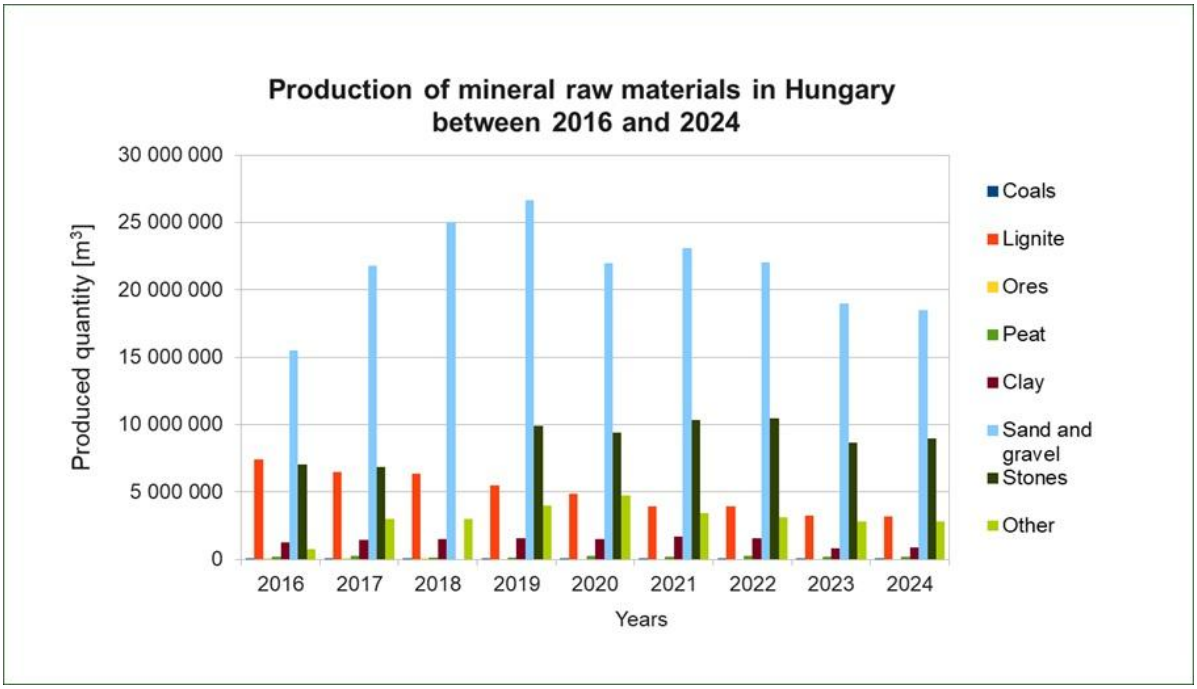



*Figure 1. Production of solid raw materials*

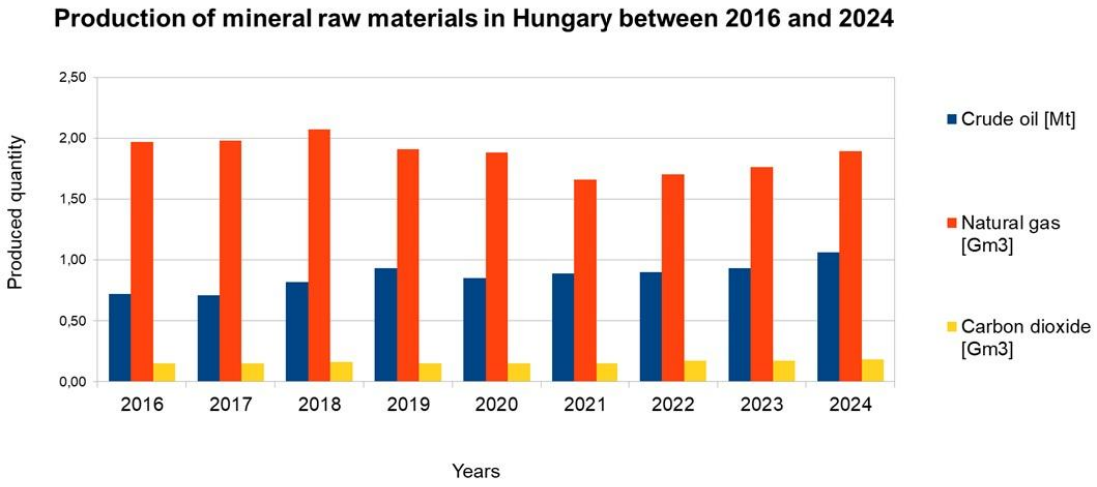



*Figure 2. Petroleum and gas production*

# 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 (WGGiIŚ)
- **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 Kołłątaja w Krakowie)**

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

https://pk-ism.org/

**Al. Adama Mickiewicza 30**
30-059 Kraków

— **sformatowano:** Angielski (Zjednoczone Królestwo)
**Kod pola został zmieniony**
— **sformatowano:** Polski

# INTERNATIONAL SOCIETY FOR MINE SURVEYING
# 52nd Presidium Meeting
# 6-8 JULY 2025
# **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.

https://pk-ism.org/

**Al. Adama Mickiewicza 30**
30-059 Kraków

Kod pola został zmieniony

— **sformatowano:** Polski

# INTERNATIONAL SOCIETY FOR MINE SURVEYING
# 52nd Presidium Meeting
# 6-8 JULY 2025
# **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

Kod pola został zmieniony

— sformatowano: Polski

https://pk-ism.org/

**Al. Adama Mickiewicza 30**
30-059 Kraków

# ASSOCIATION OF MINE SURVEYORS OF ZIMBABWE

20 Mount Pleasant Drive. Mount Pleasant. Harare. P.O. BOX 712, Harare.
+263 773 302 920, +263 773 254 961, +263 774 460 911
amszsecretary@gmail.com
www.amsz.co.zw

THE CHAMBER OF MINES OF ZIMBABWE


**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.


**Executive Committee:** M.S. Gumbie, (President), J. Gasitene (Vice), T.P. Mubaiwa (Secretary-General), G. Mwale, A. Tavengana, L. Mapasure, P. Ngwerume, C. Ngulube, T. Ndlovu, M. Mapfumo, W. D. Silunde, J.N. Magureyi

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**