

France



Name: Association Française Des Tunnels Et De L'espace Souterrain
French Tunnelling and Underground Space Association

The Aftes Premises Moved In 2017 To 42 Rue Boissière In Paris At The New Headquarters Of Ponts Alliance.

Type of structure: Association registered under the 1901 Act

Number of members: 942 members = 527 French individuals, 143 foreign individuals, 78 retired, 37 students, 120 French collectives, 10 foreign collectives, 27 others (schools, bookshops).

ASSOCIATION ACTIVITIES DURING 2017 AND TO DATE

Technical committee: The activity of the Technical Committee was very significant in 2017, with more than 25 working groups involving more than 300 members. Three recommendations are already nearing completion and ready for swift publication: Working Group 16, "Taking into account the effects of excavation on neighboring buildings in the design and construction of underground structures". GT 12: "Organization of emergency services and associated means during underground works". GT 35: "Management and use of excavation materials".

Underground Space Committee: The Underground Space Committee has carried out several awareness-raising activities with an audience ranging from the professional and institutional world to academics, particularly with students who will be tomorrow's distribution and development vectors for the ideas of AFTES. The committee also intends to strengthen its participation in international associations (ITA, ITACUS, ACUUS, IACUS) and develop collaborations with institutions and public and private bodies. On November the 16th, 199 people took part in the Architecture and Town Planning day in the basement of the 'Cité de l'Architecture' in Paris: 7 sessions, 15 conferences and a round table were in the programme.

Education Committee: The 2016-2017 class of the TOS Master's course was of a very high standard. The 11 graduate students were hired on permanent contracts at the end of their Master's degree. The 2017-2018 class of the TOS Master will welcome 12 students (out of 60 applications received). 2017 was also marked, in particular by the consolidation

of the AFTES youth group, which mobilises around the TOS Masters alumni network on one hand, and the young professionals on the other.

Materials, Equipment, Products Committee: The main objective of the Committee was to give better visibility to manufacturers and suppliers of the equipment, materials and products intended for the construction of tunnels, underground spaces and their operation. Earlier, in the spring 2017, a communication plan was put in place at the WTC International Congress in Bergen.

Communication Committee: AFTES changed its publisher for the publication of the Tunnels & Underground Space magazine in January 2017. The journal is now published quarterly. A special Congress issue was also published in November 2017 (Congress Paris). The website <http://www.aftes.asso.fr> is rich in information and has high levels of traffic. The 138 recommendations referenced on the site resulted in 9,844 downloads in 2017.

Congress Committee (Paris – 13-15th November 2017 "The value is underground"): The congress was a great success with 4,018 participants representing 56 countries. Singapore was the guest of honour at this event. 152 companies were registered as exhibitors and ten different countries were among the exhibitors. The congress gave rise to 17 sessions and 88 papers. The international element was strongly supported by the special session on operation of underground constructions co-organized with the ITA-COSUF committee and by the AITES Awards ceremony. 387 people took part in the

gala evening, during which the prizes were awarded to the winners of the 2017 Awards.

EVENTS

Ten events took place in 2017 and bear witness to the sustained activity of AFTES:

- January 17, 2017: Construction site visit for the 2000 diameter collector in Paris
- January 27, 2017: Equipment in the construction of tunnels in Lyon
- February 23, 2017: Visit to the extension of Line 4 Lot 01 in Paris
- February 28, 2017: AFTES Tuesday/RATP evening conferences in Paris
- March 10, 2017: Visit to the EDF hydropower development of Livet-Gavet in Grenoble
- May 5, 2017: Rhône-Alpes geology and tunnels in Lyon
- May 16, 2017: Safety and emergency services in the construction of tunnels in Paris
- June 23, 2017: Major underground development projects/Metro Train-Route to Lyon (a record, 234 were present)
- July 7, 2017: The hydroelectric development of La Coche in Aigueblanche
- September 28, 2017: International volunteering in companies, RER A renovation, SGP and satellite radar interferometry in Paris

TOS Masters Course (2016-2017)

The diplomas were awarded to:

- Julie Al Hout, Civil Engineering Engineer from Aleppo University (Syria) and PhD in Civil Engineering from Insa Lyon, hired by Bouygues TP
- Salah Eddine Chatouani, civil engineer at ENTPE, hired by Eiffage TP
- Alejandro Cortes Fuentes, civil engineer at the University of Santiago de Chile and at the Central School of Lyon, hired by Geos
- Pauline Faraglia, civil engineer at INSA Lyon, hired by Egis Tunnels
- Rabah Gasmi, civil engineer at the Polytechnic School of Algiers, hired by Systra
- Hadi Karam, civil engineer at the Lebanese University of Roumieh, hired by Egis Rail
- Aude Mombot-Boullard, civil engineer at INSA Lyon, hired by Bouygues TP
- Yassir Naouz, civil engineer at Mohammadia school in Rabat, hired by Arcadis
- Frédéric Payen, civil engineering engineer at ESITC Cachan, hired by Eiffage TP
- Jean Quere, engineer in civil engineering at ENSE3 in Grenoble, hired by Bessac
- Alfredo Vazquez, civil engineer at the University of Cuenca (Ecuador) and Polytech Paris, hired by Arcadis

CURRENT TUNNELLING ACTIVITIES

Main projects under construction:

PARIS EOLE

The extension of the railway line RER E to the west includes the construction of 8km of tunnel between Saint-Lazare and Nanterre in a very dense urban area.

PARIS Extension of Metro line 14 North

From Saint-Lazare to Mairie de Saint-Ouen, 2 TBMs are on the home stretch of the boring of the 5.8km tunnel of the extension of the line 14.

NICE tunnel for the West-East Tramway

Final works for the construction of a 3.2km tunnel in a dense urban area.

RENNES Metro line B

Realisation of 15 stations for a 14km tunnel.

TELT Lyon - Turin

The 57.5km long international tunnel linking France and Italy, will receive a major part of the passenger/freight traffic through the French and Italian Alps. Initiating this huge project, the TBM Federica is digging 9km of an exploratory gallery in the axis

and in the diameter of the future base tunnel.

ANDRA - BURE

Construction work on the underground laboratory began in 2000 in the commune of Bure. The experimental laboratory, 445m deep, is composed of a set of galleries where many tests and studies have been conducted. It allows, in particular, a study of the geological parameters intended to confirm the design choices of the future Storage Centre.

SIAIX: Safety Tunnel – 1.5km

GAVET: Hydraulic gallery – 9.3km

COCHE: Hydraulic gallery – 0.3km

FUTURE TUNNELLING ACTIVITIES

Main projects for the short term:

PARIS RATP: Extension of line 14 South to Orly airport.

PARIS Grand Paris: Lines 15 South, 14 North, 16 and 17 South

TOULOUSE: Metro Line 3 - Aerospace Express

MARSEILLE Metropole: Extension Line 2 Metro

LYON SYTRAL: Metro Line Extension Oullins-Hôpitalaux

GRAND LYON: Road tunnel project "Ring of the sciences"

TELT: Lyon Turin railway – to be continued

STATISTICS

1. Length or volume excavated - % mechanized/% conventional during 2017: 10km (80% mechanized and 20% conventional)
2. Amount (USD or EUR) of tunnelling/ underground space facilities awarded in 2017: €800M
3. List of tunnels completed: Safety tunnel in the "tunnel du Chat" New tunnel of the Chambon
4. List of tunnels under construction: PARIS EOLE, PARIS Extension of Metro line 14 North, NICE tunnel for the West-East Tramway, RENNES Metro line B, TELT Lyon – Turin, ANDRA - BURE

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Malaga Airport Rail Tunnel



Santoña - Laredo Sewer Tunn



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