





# **D7.1 ESRs Recruitment Report**

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## Project coordinator's scientific representative

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Project website: https://www.complete-h2020network.eu/

COMPLETE - ITN ETN - 675675 D7.1 RECRUITMENT REPORT

Beneficiary partners					
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Alexander Liberzon	TAU	alexlib@eng.tau.ac.il			
Szymon Malinowski	UW	malina@fuw.edu.pl			
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Giovanni Perona	EnviSens	giovanni.perona@envisens.com			
Gil Shamai	Pentalum	gil.shamai@pentalum.com	Terminated on 11/04/2017		
Patrizia Sforza	Sitael	patrizia.sforza@mermecgroup.com			

# Contents

1.	Description of the recruitment process	3
2.	Results of the recruitment	7
3.	Tables of candidacies	8
4.	ESR position advertisements	15

## 1. Description of the recruitment process

The criteria for the selection of candidates suitable for the 14 positions of Early Stage Researchers were first addressed and elaborated in the proposal of the COMPLETE project, confirmed during the "Kick-Off meeting", where it was decided to advertise all ESR positions in online magazines and websites of high academic renown in addition to the Euraxess portal, in order to reach as many candidates as possible.

These advertisements were published from June 2016 onwards.

The search and selection of appropriate candidates was to continue until all the positions were filled. The above mentioned online magazines and websites are:

- 1. Euraxess (http://ec.europa.eu/euraxess/index.cfm/jobs/jobDetails/34099915)
- 2. **Physics Today** (http://jobs.physicstoday.org/jobs/8307526)
- 3. **Nature Jobs** (http://www.nature.com/naturejobs/science/jobs/587441-14-phd-positions-on-cloud-microphysics-and-telemetry-marie-sklodowska-curie-esrs-fellowships)
- 4. **ResearchGate** (https://www.researchgate.net/job/876806\_14\_PhD\_positions-Cloud-MicroPhysics-Turbulence-Telemetry)
- 5. **Science Careers** (http://jobs.sciencecareers.org/job/417450/phd-fellowships/?LinkSource=PremiumListing)
- 6. Academic Positions (https://academicpositions.eu/ad/politecnico-di-torino/2016/2-phd-positions-cloud-microphysics-turbulence-telemetry/92754)
- 7. **Met Jobs** (https://www.lists.rdg.ac.uk/archives/met-jobs/2016-09/msg00088.html)
- 8. SCUDO, Doctoral School of Politecnico di Torino (http://dottorato.polito.it/en/call\_for\_admission).

All these advertisements are included at the end of this document, see point 4, page 16.

The last ESRs that were recruited were the ESR-8 Antonio Ibanez Landeta (recruited by Max Planck) and ESR-14 Tung Bui Duc that is under the recruitment procedure (recruited by Sitael).

By the eligibility criteria in **the Marie Sklodowska-Curie Actions**, researchers are required to undertake transnational mobility when taking up the appointment, see H2020 Guide for Applicants and

<u>http://ec.europa.eu/research/participants/data/ref/h2020/other/guides\_for\_applicants/h2020-guide-appl16-msca-rise\_en.pdf</u>. In the following, a summary of the **eligibility criteria** is recalled.

## Applicants need to satisfy three principal eligibility criteria:

• **Early-stage researchers** (ESR) are those who are, at the time of recruitment by the host, in the first four years (full- time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate was envisaged.

- Conditions of international mobility of researchers: Researchers were required to undertake transnational mobility (i.e. move from one country to another) when taking up the appointment. At the time of selection by the host organization, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organization for more than 12 months in the 3 years immediately prior to their recruitment. Short stays, such as holidays, were not taken into account.
- **English language**: Network fellows (ESRs) had to demonstrate that their ability to understand and express themselves in both written and spoken English was sufficiently high for them to derive the full benefit from the network training.

Furthermore, **COMPLETE** acts under the European Charter of Researcher which grants equal opportunity to all applicants. **Qualified applicants received consideration without regard to race, color, sex, gender identity, religion and nationality**.

The results of the aforementioned advertisements were fruitful for, in total, there were 147 applicants for the 14 positions of Early Stage Researchers in the COMPLETE Network. It must be noted that there were only a few applicants who applied to more than one position offered by different partners of the COMPLETE project.

Applicants came from 40 countries, of which 78,2% are male candidates and only 21,8% are female candidates, see figure 1. It is interesting to observe that very few candidates from Eastern Europe have applied to the project and the number of European applicants is much lower than the number of applicants coming from the rest of the world. The majority of applicants are from India (24%) and Iran (22%), followed by Italy with 7%, Nigeria with 5% and Germany, Greece and Pakistan with 3% each. The participation of all the European candidates was lower than 15% whereas all other countries, apart from India and Iran, have less than 5% of applicants representing them, see figure 2.



## FIGURE 1



Number of applicants (per country) to the H2020 ETN COMPLETE

## FIGURE 2

# **Table explaining figure 2**

	Percentage of
Country	applicants
Fiji	< 1%
Spain	1%
Greece	3%
Mexico	1%
Poland	< 1%
Kazakhstan	1%
Egypt	2%
India	24%
Ethiopia	1%
Taiwan	< 1%
Iran	22%
Nigeria	5%
Saudi Arabia	< 1%
Sri Lanka	< 1%
Pakistan	3%
Bangladesh	5%
Singapore	< 1%
Malaysia	< 1%
Morocco	1%
Italy	7%
China	< 1%
Ukraine	< 1%
Serbia	< 1%
Palestine	< 1%
Cuba	< 1%
Lebanon	< 1%
Japan	< 1%
Uzbekistan	< 1%
Germany	3%
Netherlands	< 1%
Chile	< 1%
Vietnam	< 1%
Madagascar	< 1%
Turkey	< 1%
Rwanda	< 1%
Belgium	< 1%
Romania	< 1%
Ecuador	< 1%
Australia	< 1%
USA	< 1%

## 2. Results of the recruitment

Out of 14 positions for the COMPLETE project, 10 (71,4%) have been assigned to male and 4 (28,6%) to female candidates.

The recruitment followed the rules of Marie Sklodowska Curie Actions that treats all the applicants without regard to race, color, sex, gender identity, religion and nationality. The recruitment process, after the collection of all the necessary documentation, was done through skype conferences with candidates, verification of their CVs and reference letters. The candidates' referees were contacted to verify their academic preparation. All the beneficiary partners of the network followed the same criteria. Information on all the ESRs are available on the internet page of COMPLETE: <a href="https://www.complete-h2020network.eu/">https://www.complete-h2020network.eu/</a>.

The candidates of the COMPLETE project represent 11 different countries distributed in 5 continents and thus, the participation to the project is very much international, see table 1. The majority of the ESRs have also finished a part of their studies abroad, typically the Master Degree, which is an advantage from the general cultural point of view and socialization issues. Four out of 14 ESRs already have families; 3 are married and 1 already has a child.

As seen in the table 1, the list of ESRs of the COMPLETE project is finalized. The deadline by the MSCA rules for the recruitment of all the ESRs was 31<sup>st</sup> May 2017 but due to problems related to the difficulties of recruitment met by Tel Aviv University, Pentalum's default and position renouncements by candidates that were already chosen, the recruitment is going to be finalized by the beginning of October 2017. The ESRs recruited after May 31<sup>st</sup> 2017 were Mina Golshan, Miryam Paredes, Antinio Ibanez Landeta and Tung Bui Duc. Mina Golshan's contract started at POLITO as of July 1<sup>st</sup>, 2017, and Miryam Paredes's contract started at ENVISENS as of July 20<sup>th</sup>, 2017. Antonio Ibanez Landeta (ESR-8) has started his position at MPI Goettingen on September 1<sup>st</sup>, 2017. Recruitment is still ongoing for the last ESR at SITAEL, i.e. ESR-14, Tung Bui Duc. For the first two delay reasons, an Amendment to the Grant Agreement was submitted to the Research Executive Agency to reallocate ESR1-13 to POLITO and ESR-8 to MPG, following a collective decision by the Supervisory Board summoned on March 10, 2017. The Amendment was accepted by REA on May 29<sup>th</sup>, 2017.

Name	Surname	E-mail address	Nationality	Gender
Taraprasad	Bhowmick	taraprasad2207@gmail.com	India	М
Tessa Chiara	Basso	tessa.basso@polito.it	Australia - Italy	F
Tai	Wada	t.wada@imperial.ac.uk	Japan	М
Vishnu	Nair	v.satheesh-kumar-nair16@imperial.ac.uk	India	М
Guus	Bertens	guus.bertens@ds.mpg.de	Netherlands	М
Johannes	Guettler	johannes.guettler@ds.mpg.de	Germany	М
Marco	Boetti	marcoboetti@mail.tau.ac.il	Italy	М
Antonio	Ibanez Landeta	a.ibanez.landeta@gmail.com	Chile	М
Moein	Mohammadi	moein.mohammadi@fuw.edu.pl	Iran	М
Emmanuel	Akinlabi	emmanuel.akinlabi@fuw.edu.pl	Nigeria	М

## Table 1

Sara	Shamekh	shamekh@lmd.ens.fr	Iran	F
Miryam Elizabeth	Paredes Quintanilla	miryam.paredes@envisens.com	Ecuador	F
Mina	Golshan Koviji	mina.golshan@polito.it	Iran	F
Tung	Bui Duc	tungbd@vnu.edu.vn	Vietnam	М

In the following, we enumerate some further general information that we consider of possible interest for the Project Officer and REA officers working on MSCA ETN work programmes.

Of all the applications received, there were many who were only acquiring some information, and others that sent incomplete applications and did not follow through. This made the recruitment process particularly complicated as there were many applicants that revealed themselves as not appropriate to the network objectives and did not fulfill the MSCA eligibility criteria. Verifying the validation of information stated in candidates' curricula and reference letters was difficult for not all the referees responded. This could indicate that the reference letters or information provided by the candidates were not recent ones. Another great problem that was encountered during the recruitment process was that some of the chosen candidates renounced their position at the very last moment. Sitael, for example, had two candidates who renounced their positions: a Greek candidate who renounced the position after selection and a second candidate from Bangladesh, who, during the process of VISA application was not pro-active in providing requested information, and whose reference letters were not confirmed by his referees. ENVISENS experienced the renounce of a candidate from Bangladesh after the VISA request process was successfully finalized. (Note to Project Officers: reference letters have been archived and are available if necessary.) There were other renunciations of ESR positions (at MPI, POLITO, UW) but they happened in a preliminary phase of the recruitment and thus were not so problematic even if they induced a substantial loss of time.

## 3. Tables of candidacies

Below are the tables that include information on all of the applicants who showed interest in ESR positions in the COMPLETE project.

Name	Surname	E-mail address	1st contact date	Nationality	Gender	Comments
Kunal	Dajal	kunal_k_dayal@yahoo.com	13/07/2016	Fiji	М	Incomplete application.
Juan Ahuir	Torres	juanahuirtorres@hotmail.com	13/07/2016	Spain	М	Not eligible (he already has a PhD).
Ioannis	Cheliotis	ioannis.cheliotis@yahoo.gr	20/07/2016	Greece	М	Skype interview, October 2016.
Guillermo	Diaz Ortiz	guillermo.diaz@tu-dortmund.de	20/07/2016	Mexico	М	Not eligible (he has already a PhD).
Hajar	Taheri Afarani	taheri.hajar.ht@gmail.com	21/07/2016	Iran	М	Contacted on 25/7 but never receive any reply from him.
Atta Ur	Rehman	atta_botanist@yahoo.com	22/07/2016	Pakistan	М	Incomplete application.

# Politecnico di Torino (POLITO) applicants

						Never received the documentation requested on 25/7 (Eligibility questionable, MS in 2011).
Sathiya	Bhama Subbiah Doss	sdsathiyabhama@gmail.com	22/07/2016	Singapore	F	Incomplete application. Never received the documentation requested on 25/7 (Eligibility questionable, MS in 2012).
Kamran	Golahmadi	kamran0913@gmail.com	22/07/2016	Malaysia	М	Incomplete application. Moreover, he did not indicate what position he was interested in. Answer on 25/7, never received a reply.
Nassima	Benchtaber	nassimabenc@gmail.com	24/07/2016	Morocco	F	Incomplete application. Never received the documentation requested on 25/7 and 27/9.
Sanjay Krishna	Mohan	saniaykmohan11@gmail.com	25/07/2016	India	м	Incomplete application.
Margad	Mostoghimi	marsadkhan@amail.com	20/07/2016	Iron	м	Non-appropriate
Wersau	Wostagnini	mersauknan@gman.com	50/07/2010	Iran	IVI	Invited to apply for ESR-12
Ali	Jokar	a.jokar2016@gmail.com	2/8/2016	Iran	М	or 14 on 30/9. Skype interview, October
Thomas	Tom	thomastomphysics@gmail.com	11/8/2016	India	М	2016.
Valentina Maria	Marchica	valinam@msn.com	16/08/2016	Italy	F	Italy): Incomplete application, CV only.
Shashank	Gupta	shahsankgupta@gmail.com	20/08/2016	India	М	No real application, he asked for information.
Heena	Tyagi	heena_tyagi50@yahoo.co.in	4/9/2016	India	F	Incomplete application (CV only). Never received the documentation requested on 16/9.
Shyam						Incomplete application (CV only) Not eligible (MS in
Sunder	Chauhan	samchauhan27.sc@gmail.com	4/9/2016	India	М	2011).
Tessa Chiara	Basso	tessa.basso@gmail.com	8/9/2016	Australia- Italy	F	Accepted as ESR-2, November 2016. (Recruitment completed in January 2017).
Filip	Morawski	morawski.filip@vahoo.com	13/09/2016	Poland	М	Skype interview in October 2016.
						Incomplete application. She never sent the documentation requested on
Gulzhan	Khamitova	gulzhan.khamitova@nu.edu.kz	20/09/2016	Kazakhstan	F	22/9.
Mohamed	Mohsen	mo.mohsen@hotmail.com	24/09/2016	Egypt	М	Non-appropriate background.
Alam	Tabrez	tabrez30@gmail.com	27/09/2016	India	М	Non-appropriate background.
Leta	Tesfave	leta.2010@vahoo.com	28/09/2016	Ethiopia	М	Non-appropriate background.
Yitea	Seneshaw	yiseneshaw@gmail.com	29/09/2016	Taiwan	M	Not eligible (MS in 2012).
Niloofar	Sayyad Khodeshenas	n.khodashenas@gmail.com	29/09/2016	Iran	F	Suggested to apply for ESR-12/13 on 29/9.

						Non-appropriate
Rajesh	Vaishnav	vaishnav.rajesh99@gmail.com	30/09/2016	India	М	background.
Abimbola	Ashaju	samuelashaju@gmail.com	1/10/2016	Nigeria	М	Incomplete application.
				Saudi		Non-appropriate
Nawaf	Alshathri	shathri99@hotmail.com	4/10/2016	Arabia	М	background.
						Non-appropriate
Zahra	Dehghanifard	l_dehghanifard@yahoo.com	7/10/2016	Iran	F	background.
Delet	NT		12/10/2016	T. 1'.	м	Non-appropriate
Rajat	Nag	rajat.nag@ucdconnect.ie	12/10/2016	India	M	background.
Vannis	Vasilopoulos	iean vasil@gmail.com	12/10/2016	Greece	м	November 2016
1 diffits	Khieini	alirezapoorfar@alumni just ac ir	12/10/2010	Greece	111	Non-appropriate
Alireza	Poorfar	alireza.poorfar@gmail.com	12/10/2016	Iran	М	background.
Thiruchelyam	Arudchelvam	tarudchelvam@gmail.com	13/10/2016	Sri Lanka	м	Not eligible MS in 2004
Thirdenervani	Aiudeneivani		13/10/2010	SII Laika	111	Non-appropriate
Amir	Azad	amirazad@iasbs.ac.ir	25/10/2016	Iran	М	background.
						Incomplete application.
						Redirected toward positions
Sohaib	Naseem	sohaib_nasim@hotmail.com	3/11/2016	Pakistan	М	ESR-12, 13, 14.
						Suggested to apply for
Ikramul	Haque	rakib_mihaque@yahoo.com	6/11/2016	Bangladesh	М	positions ESR-12, 13, 14.
0	M.1.C.		22/11/2016	To at	м	Skype interview in
Omar	Mahfoze	omar.mahfoze15@imperial.ac.uk	22/11/2016	Egypt	M	December.
Farnoosh	Ataei	farnoosh.ataei@gmail.com	25/11/2016	Iran	F	Incomplete application.
NZC.	TT	1	20/11/2016	Cline	м	Non-appropriate
Y unfei Mohammad	Huang	nuangyunfei159551@gmail.com	30/11/2016	China	M	background.
Reza	Momenifar	m momenifar@alumni ut ac ir	2/12/2016	Iran	м	holl-appropriate
Roza	Womennar	in_inoincintar @ arunnit.ut.ac.ii	2/12/2010	Indif	141	Skype interview in January
						2017. Accepted the position
						of ESR/1 but renounced on
Roman	Bardakov	romanbardakov@gmail.com	11/12/2016	Ukraine	М	12/2/2017.
-						Not eligible, MS foreseen
Sara	Marković	sara.markovic.ra@gmail.com	14/12/2016	Serbia	F	in September or July 2017.
Daza	Nouri	ran 2006 @ amail a am	15/12/2016	Inon	м	Non-appropriate
Reza	Nouri	rzn2006@gmail.com	15/12/2010	Iran	IVI	Not aligible: MS foreseen
Kumar	Abhishek	ihaabhishek 926@gmail.com	21/12/2016	India	м	in April 2017
IXumu	romsnek	Jinduolinshek.920 C gindin.com	21/12/2010	India		Non-appropriate
Zouhair	Nouaman	nouaman-zouhair@hotmail.com	21/12/2016	Morocco	М	background.
Ashra Ful						Non-appropriate
Alam	Ripon	riponmcs@gmail.com	23/12/2016	Bangladesh	М	background.
						Non-appropriate
Arash	Shadlaghani	a.shadlaghani@gmail.com	13/01/2017	Iran	М	background.
A .l	Cuillen	ad miliar@ushaa as m	7/1/2017	Dalaistan	м	Non-appropriate
Adnan	Gujjar	ad.gujjar@yanoo.com	//1/2017	Pakistan	IVI	Non appropriate
Hadi	Rezaee	rezaie hadi h@gmail.com	22/01/2017	Iran	м	background
Tiadi	Rezuee		22/01/2017	Indif	141	Non-appropriate
Abdallah	Shaheen	shaheen.aa90@gmail.com	23/01/2017	Palestine	М	background.
Camilo	Rodríguez					Not eligible, MS foreseen
Fernando	Genó	kmi.rodriguez901101@gmail.com	29/01/2017	Cuba	М	in July 2017.
						Incomplete application (CV
Arshini	Saikia	saikia.arsh2015@gmail.com	30/01/2017	India	F	only).
Hamid	Tebyanian	hamid.tebyanian@gmail.com	31/01/2017	Iran	М	Incomplete application.
Farid	Rousta	farid.rousta@gmail.com	4/2/2017	Iran	М	Non-appropriate

						background.
						Accepted as ESR-1, March
						2017. (Recruitment
Taraprasad	Bhowmick	taraprasad2207@gmail.com	8/2/2017	India	М	completed in May 2017.)
						Recruited as ESR-13, June
Mina	Golshan Koviji	roomina.golshan@gmail.com	24/02/2017	Iran	F	2017.
						Non-appropriate
Nadeem	Alkurdi	nadeem.alkurdi@gmail.com	21/02/2017	Lebanon	М	background.
	Yousefi	Babak86yousefi@gmail.com				Non-appropriate
Babak	Lafouraki	B.Yousefi@stu.nit.ac.ir	25/03/2017	Iran	М	background.
	Momeni	morsalmomeni@gmail.com				Non-appropriate
Morsal	Larimi	morsalmomeni@stu.nit.ac.ir	17/04/2017	Iran	М	background.
						Non-appropriate
Shohreh	Monshizadeh	shohreh257@gmail.com	22/04/2017	Iran	F	background.
		kkn.kiyar@gmail.com				Non-appropriate
Abraha	Kedir Kiyar	k.abraha@studenti.unibs.it	28/04/2017	Ethiopia	М	background.
						He applied for the position
						of ESR-1 which was
Ananth	Ranjithkumar	ananth.ranjithkumar@gmail.com	1/6/2017	India	М	already assigned.
		rafiqme99buet@gmail.com				Recruitment already
Rafiqul	Islam	mri9982@gmail.com	28/06/2017	Bangladesh	М	completed.
						Recruitment already
Mohammed	Nur	ratoncu1984@gmail.com	4/7/2017	Bangladesh	М	completed.
		-				Recruitment already
Sandeep	Kaur	deepbs355@gmail.com	19/08/2017	India	М	completed.

# Imperial College of Science, Technology and Medicine, London (ICL) applicants

Name	Surname	E-mail address	Nationality	Gender	Comments
Nandini	Loganathan	nandloganathan@gmail.com	India	М	Not as good a background as others.
Akshaya Chadrakant	Nikumbh	akshayanikumbh10@gmail.com	India	F	Not as good a background as others.
Clement Nkemakonam	Njoku	njokuclement@yahoo.com	Nigeria	М	Not as good a background as others.
Vivek Chandrakant	Patkar	vcpatkar@gmail.com	India	М	Not as good a background as others.
Francesca	Vittorioso	francesca.vittorioso@outlook.com	Italy	F	Not as good a background as others.
Tai	Wada	mokiti58@gmail.com	Japan	М	Excellent background as he worked on numerical simulation of particles in turbulence for his MSc project.
Vishnu	Nair	vishnusnair89@yahoo.com	India	М	Did some really impressive work on compressible flows during his MSc by developing a code from scratch.
Rohith	Jayaram	anandatirta@gmail.com	India	М	Excellent background as he worked on numerical simulation of particles in turbulence for his MSc project.

# Max Planck Gesellschaft zur Foerderung der Wissenschaften (MPG) applicants

Name	Surname	E-mail address	Nationality	Gender	Comments
Morteza	Alizadeh	morteza_alizade86@yahoo.com	Iran	М	
Shushant	Chaudhary	shushantchaudhary1990@gmail.com	India	М	
Lorenzo	Pistone	lorenzo.pistone@unito.it	Italy	М	
Nilanjon	Naskar	nilanjon15@gmail.com	India	М	
Masoud	Arabghahestani	masoud.arabghahestany@gmail.com	Iran	М	
Mohammad	Samanipoor	m.samanipoor@iasbs.ac.ir	Iran	М	
Robert	Braunschweig	robert-braunschweig@gmx.de	Germany	М	
Jasmin	Ebert	JasminEbert@gmx.net	Germany	F	
Nosaibeh	Esfandiary	nosaibehesfandiary@gmail.com	Iran	F	
Paride	Ferrante	parideferrante@yahoo.it	Italy	М	
Saba	Alizadehfanaloo	salizadeh1991@alumni.ut.ac.ir	Iran	F	
Kamoladdin	Egamberdiev	kegamberdiev@yandex.ru	Uzbekistan	М	
Samaneh	Esfandiery	samanehesfandiary@gmail.com	Iran	F	
Milad	Behrooz	m.behrooz@alumni.ut.ac.ir	Iran	М	
Kanhaiyalal	Mantri	mantri_kanhaiya@yahoo.com	India	М	
Mojtaba	Maktabifard	Mojtaba.mfard@gmail.com	Iran	М	
Thomas	Tom	thomastomphysics@gmail.com	India	М	
Francesco	Marson	marson.francesco@gmail.com	Italy	М	
Johannes	Guettler	johannes.guettler@yahoo.com	Germany	М	
Amibbola	Ashaju	samuelashaju@gmail.com	Nigeria	М	
Gabriele	Nastro	nastrogabriele@gmail.com	Italy	М	
Youssef	Ahmed	youssefbanora@gmail.com	Egypt	М	
Guus	Bertens	guube@stack.nl	Netherlands	М	
Rohit	Badaya	rohit_badaya@yahoo.com	India	М	
Mattia	Stefano	mattia.stefano@hotmail.it	Italy	М	
Philip	Wittmann	philipp_wittmann@web.de	Germany	М	
Abhishek	М	m.abhishek1994@gmail.com	India	М	

Morteza	Rasouli Gandomani	rasouli.gandomani@gmail.com	Iran	М
Peyman	Rostami	pym.rostami@gmail.com	Iran	М
Reyna	Ramirez	reynapez@ciencias.unam.mx	Mexico	F
Mohammadreza	Azimi	m_r_azimi1991@yahoo.com	Iran	М
SeyedReza	Hassanianmoaref	reza.hassanian@gmail.com	Iran	М
Antonio	Ibanez Landeta	a.ibanez.landeta@gmail.com	Chile	М
Arsen	Kadyrov	kaa286@gmail.com	Kazakhstan	М
Prayag	Tiwari	prayagforms@gmail.com	India	М
Sunil	Kumar Sansaniwal	sansaniwal@gmail.com	India	М
Swapnil	Prabhakar Kharche	kharcheswapnil07@gmail.com	India	М

# Tel Aviv University (TAU) applicants

Name	Surname	E-mail address	Nationality	Gender	Comments
Youssef	Ahmed Soliman Abdelghany	youssefbanora@gmail.com	Egypt	М	
Cristiano	Barbesino	barberinocristiano@yahoo.it	Italy	М	
Dimitris	Malamas	dmalamas@gmail.com	Greece	М	
Likitha	Siddanathi	sailikitha04@gmail.com	India	F	
Marco	Boetti	marco.boetti@edu.unito.it	Italy	М	
Rohith	Jayaram	anandatirta@gmail.com	India	М	
Shaik	Subhani	shaik.subhani71@gmail.com	India	М	
Tung	Bui Duc	tungbd@vnu.edu.vn	Vietnam	М	

# Uniwersytet Warszawski (UW) applicants

Name	Surname	E-mail address	Nationality	Gender	Comments
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Emmanuel	Akınlabı Olutayo	senegal.org	Nigeria	M	(master thesis in AIMS Senegal)
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					(master thesis in ECOLE CENTRALE DE NANTES in
Paul	Gurpratap Singh	gurpratapsinghpaul@hotmail.com	India	М	France)
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					(master in ISAE, SUPAERO
Rohith	Jayaram	anandatirta@gmail.com	India	М	Toulouse – France)
Francesco	Marson	marson.francesco@gmail.com	Italy	М	
Francesco	Matacchiera	matacchiera.francesco@gmail.com	Italy	М	

Vahanna	Mandiladi	mendilyi.yohanna@aims-	Niceria	F	(master thesis in ADAC Several)
ronanna	Mendilyi	senegal.org	Nigeria	Г	(master thesis in AIMS Senegal)
Moein	Mohammadi	mohammadi.moein90@gmail.com	Iran	М	
Namdev	Oulkar Sunil	sunil.oulkar@gmail.com	India	М	
	Rafalimanana				(master thesis in Ecole
Jean Pierre	Alohotsy	raajeanpierre@gmail.com	Madagascar	М	Polytechnique in France)
Sefa	Şahin	sefasahin@gmail.com	Turkey	М	
Likitha	Sai Siddanathi	sailikitha04@gmail.com	India	F	(master thesis in ECE in France)
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# Centre National de la Recherche Scientifique (LMD) applicants

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# EnviSens Technologies S.r.l. applicants

Name	Surname	E-mail address	Nationality	Gender	Comments
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# Sitael Spa applicants

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Filip	Morawski	morawski.filip@yahoo.com	Poland	М	
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Youssef	Ahmed Soliman Abdelghany	youssefbanora@gmail.com	Egypt	М	

# 4. ESR position advertisements

This part is actually an appendix where we attach copies of original advertisement documents.

# H2020-MSCA European Training Network





Cloud-MicroPhysics-Turbulence-Telemetry: An inter-multidisciplinary training and research network for enhancing the understanding and modeling of atmospheric clouds "



14 PhD positions in the EU Horizon 2020 Marie Skłodowska-Curie ACTION ITN ETN Project COMPLETE

Applications are invited for **14 PhD** positions ("Early Stage Researchers") to be funded by the Marie-Skłodowska-Curie Innovative Training Network "COMPLETE – Cloud-MicroPhysics-Turbulence-Telemetry: An intermultidisciplinary training network for enhancing the understanding and modeling of atmospheric clouds within the Horizon 2020 Programme of the European Commission. COMPLETE is a consortium of high profile universities, research institutions and companies located in Italy, France, Germany, Israel, Poland and UK.

### Number of positions available

14 PhD positions

### **Research Fields**

Turbulence, Atmospheric physics and dynamics, Environmental monitoring, Scientific computing and data processing

### **Keywords**

Warm clouds, turbulent entrainment, remote sensing, radiosondes, LIDAR, aerosol spectrometers, Lagrangian tracking, droplet generators, in-situ experiments, laboratory experiments

Career Stage Early Stage researcher (ESR)

## **General contacts for COMPLETE**

**Prof. Daniela Tordella** – General Coordinator MSCA-ITN-ETN COMPLETE Department of Mechanics and Aerospace Engineering | Politecnico di Torino 10129 Torino Italy Tel (+39) 011 090 6812|, complete-network@polito.it

**Dr. Michele Iovieno** – Project Manager MSCA-ITN-ETN COMPLETE Department of Mechanics and Aerospace Engineering | Politecnico di Torino 10129 Torino Italy Tel (+39) 011 090 6853,| complete-network@polito.it

The website is under construction, see oncoming www.complete-h2020network.eu

**Beneficiaries:** Politecnico di Torino, Imperial College London, Max Planck Institut für Dynamik und Selbstorganisation, Universytet Warszawski, Tel Aviv University, CNRS, Envisens s.r.l., Pentalum Ltd, Sitael s.p.a.

**Partner organizations:** Max Planck Institut für Meteorologie, Istituto per le Scienze dell'Atmosfera e del Clima/CNR, Bayerische Forschungsallianz, Umweltforschungsstation Schneefernerhaus, MTF z.o.o., I3P, Ramot, Regione Piemonte

#### **Benefits and salary**

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months. In addition to their individual scientific projects, all fellows will benefit from further continuing education, which includes internships and secondments, a variety of training modules as well as transferable skills courses and active participation in workshops and conferences.

### **Eligibility criteria**

Applicants need to fully satisfy three eligibility criteria:

- Early-stage researchers (ESR) are those who are, at the time of recruitment by the host, in the first four years (full- time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate was envisaged.
- Conditions of international mobility of researchers: Researchers are required to undertake transnational mobility (i.e. move from one country to another) when taking up the appointment. At the time of selection by the host organization, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organization for more than 12 months in the 3 years immediately prior to their recruitment. Short stays, such as holidays, are not taken into account.
- English language: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.

More details on the eligibility criteria can be found in **the Marie Skłodowska-Curie Actions** H2020 Guide for Applicants <u>http://ec.europa.eu/research/participants/data/ref/h2020/other/guides\_for\_applicants/h2020-guide-appl16-msca-rise\_en.pdf</u>.

### **Recruitment procedure**

Description of the available positions is listed below. All candidates are invited to get in touch with the host institution contact persons (including by knowledge the coordinator Prof. Daniela Tordella at <u>complete-network@polito.it</u>).

Applications must include:

- CV,
- statement of research interests,
- list of three people who agreed to write a reference letter,
- original transcripts of the Batchelor and Master University Degrees

- copy of valid identity documents.

As above specified, applicants will need to prove that they are eligible according to the ESR definition, international mobility requirement and English language proficiency.

# Applications preferably completed by September 2016, although the search will continue until all positions are filled.

**Project Abstract:** Clouds are the largest source of uncertainty in weather prediction, climate science, and remain a weak link in modeling atmospheric circulation. This is rooted in the fact that clouds depend on the physical and chemical processes over a huge range of scales, from the collisions of micron-sized droplets and particles to the airflow dynamics on the scales of thousands of meters. Since ambiguities related to representation of clouds in climate models prevail, explorative observations are still needed. The challenge is on the one hand to establish connections across this range of scales, from aerosol and particle microphysics to macro-scale turbulent dynamics in clouds, and on the other to combine knowledge and training across vastly different scientific and engineering disciplines. The aim of COMPLETE is to develop an inter/multidisciplinary training network that will prepare high-potential early stage researchers (ESRs) with both scientific and industrially-oriented skills that will advance our understanding in these multi-scale complex natural phenomena. COMPLETE will vastly improve Europe's position as a global leader in technology, science and innovation to address climate change challenges. The training pro-

gramme will combine the scientific investigation of specific aspects of cloud physics and related turbulent dynamics with training in key professional skills. This comprises an exceptional experimental programme that includes field experiments, laboratory and numerical simulations, the design and development of advanced fast temperature probes, velocity MEMS and innovative atmospheric mini radio-sondes; all aimed at the production of new, Lagrangian based, cloud fluctuation datasets, required to reduce the fragmentation of results and knowledge in this field.

### The 14 available positions

### ESR 1: Transport across warm turbulent cloud interfaces.

*Objectives:* Numerical analysis by using Lagrangian Turbulence spectral solvers of the transport of energy, water vapor and droplets across the interface warm cloud/clear air in a stably and non-stably stratified environment. Lagrangian analysis of small inertial water droplets in suspension (1 - 100  $\mu$ m) across turbulent-non turbulent cloud interfaces and inside warm clouds. The system includes effects associated to buoyancy and condensation/evaporation.

*Expected Results:* Measure of the spreading rate of the vapor across the interface and of the entrainment of dry air or detrainment of moisture. Determination of the flow rates and their modelling. Creation of a Lagrangian database for dispersed small water droplets.

Host: Politecnico di Torino, Italy

Contact person: Prof.Daniela Tordella (daniela.tordella@polito.it), Dr. Michele Iovieno (michele.iovieno@polito.it)

### ESR 2: Floating cloud radiosonde data analysis from infield and laboratory experiments.

*Objectives:* Analysis of data produced by innovative expendable bio-compatible radio-probes released and floating in warm clouds. Comparison of field data with numerical simulations

*Expected Results:* Advanced spectral and statistical data from such observation. Contribution to shaping our understanding of microphysical processes in clouds. Generation of a Lagrangian data base for pressure, temperature, humidity, aerosol concentration, velocity and acceleration fluctuations inside warm clouds over lands and alpine environment.

*Host:* Politecnico di Torino, Italy

Contact person: Prof.Daniela Tordella (daniela.tordella@polito.it), Dr. Michele Iovieno (michele.iovieno@polito.it)

# ESR 3: Interfacial dynamics of aerosols and droplets. Attention one position of these 2 positions has been already assigned

*Objectives:* Study of particles (aerosols/droplets) in interfacial dynamics either in shear-free mixing layers where the interface is between two different turbulent intensity fields or in cases where the interface will be between a turbulent and a non-turbulent field. Study of interfaces as they appear in wakes and jets to simulate in the laboratory and the computer the kind of turbulent/non-turbulent interfacial physics which may be found in clouds under certain conditions. In all these flows, entrainment of inertial particles but also the effect of entrainment and of the presence of the interface on turbulence dynamics will be a focus of research.

*Expected Results:* A model for how the interface modulates the acceleration field, the behaviour of swarms of droplets/particles.

Host: Imperial College London, UK

*Contact persons:* Prof. J.Christos Vassilicos (j.c.vassilicos@imperial.ac.uk), Prof. Maarten van Reeuwijk (<u>m.vanreeuwijk@imperial.ac.uk</u>)

### Note, ESR 3 has just been appointed

### ESR 4: The effect of buoyancy on the dynamics of aerosols and particles.

*Objectives:* Numerical study (Direct Numerical Simulation) of the interaction between the flow interface and an approximately collocated buoyancy interface. Influence of the nonlinear dependence of buoyancy on mixing fraction in clouds, and how these enhance/reduce turbulent exchange. Dynamics of buoyant inertial particles.

*Expected Results:* Parametrizations of the dynamics of aerosols/droplets for incorporation into GCMs and atmospheric dispersion models; Turbulence models for LES/RANS.

Host: Imperial College London, UK

*Contact persons:* Prof. J.Christos Vassilicos (j.c.vassilicos@imperial.ac.uk), Prof. Maarten van Reeuwijk (m.vanreeuwijk@imperial.ac.uk)

### ESR 5: Drop dynamics in turbulent flows.

*Objectives:* Experimental measurement of the acceleration and relative velocity of micrometric droplets in warm clouds in situ at the research station Schneefernerhaus (WP 3,4). Numerical scheme capable of reproducing the

experimental results (WP 3, 4).

*Expected Results:* New experimental data on the dynamical behaviour of drops in turbulent flows found in warm clouds. Simultaneous development of a numerical model that would examine the same system, but over a larger range of relevant parameters, in order to better assess the importance of the critical environmental variables on the process.

Host: Max Planck Institut für Dynamik und Selbstorganisation, Germany

Contact person: Prof. Eberhard Bodenschatz (eberhard.bodenschatz@ds.mpg.de)

### ESR 6: Development of a droplet generator, drop collision measurement.

*Objectives:* To develop a drop generator capable of rapid creation of liquid droplets of sizes 5-50 µm, similar to those typically found in warm clouds. To control also the initial velocity of the created drops, both in magnitude and direction. Experimental measurement of the coalescence rate of droplets generated with the device.

*Expected Results:* Design, prototyping, calibration and testing of a new droplet generator, with drop size and drop velocity control. The drop generator can then be used to calibrate other equipment (e.g. particle-tracking systems, interferometers) and to speed up and refine other experiments. Using two such devices, experimental results on the drop collision and coalescence rate can be obtained, leading to a better understanding of their dependence on the relative velocity, size and angle of impact of the drops.

Host: Max Planck Institut für Dynamik und Selbstorganisation, Germany

Contact person: Prof. Eberhard Bodenschatz (eberhard.bodenschatz@ds.mpg.de)

# ESR 7: Lagrangian properties of aerosol parcels at the turbulent/non-turbulent interfaces with density jumps.

*Objectives:* Experimental and numerical based estimates of "apparent diffusivity" of particles and fluid parcels crossing the turbulent/non-turbulent interfaces with density jumps.

*Expected Results:* Parameterisation and a model of the spreading rate and "apparent diffusivity" constants as a function of density jump, and particle-related parameters (Reynolds, Stokes).

Host: Tel Aviv University, Israel

Contact person: Prof. Alex Liberzon (alexlib@eng.tau.ac.il)

# ESR 8: Development of the multi-MEMS-sensor-probe for the three dimensional turbulent velocity and vorticity measurements at sub Kolmogorov scales in atmospheric turbulent flows and clouds.

*Objectives:* Design and development of a multi-sensor probe based on the unique MEMS-based technology, providing multi-component measurements of turbulent properties in atmospheric turbulent flows and in clouds. *Expected Results:* A set of MEMS-based probes based on different design with adaptation for in-flight vs stationary

measurements, hardware and software development for the rapid probe deployment.

Host: Tel Aviv University, Israel

Contact person: Prof. Alex Liberzon (alexlib@eng.tau.ac.il)

### ESR 9: Small-scale turbulence and spatial distribution of droplets in clouds.

*Objectives:* The project is aimed at joint investigation of droplet spatial distribution and small-scale turbulence in clouds. We plan measure positions and velocities of cloud droplets in a two-dimensional plane enlightened by a laser sheet technique. We will build a device allowing for uniform illumination of cloud volume of the area ~50x50 cm<sup>2</sup> and of variable thickness (~1 mm to ~2 cm). This will allow for visualization of cloud droplets within this volume and quantitative multi-scale (from below Kolmogorov scale to Taylor microscale) measurements of droplet clustering and small scale turbulence. We will test a prototype of this instrument in a laboratory cloud chamber at UW and in wind tunnels at MPG. We will use the instrument to measure properties of clouds in a mountain laboratory (preferably Schneefernenhaus at Zugspitze). We will perform collocated measurements of temperature fluctuations in cloud with our Ultra-Fast Thermometer and/or turbulence measurements with a fine instrument by TAU and PTL in order to investigate small-scale effects of inhomogeneous/homogeneous turbulent mixing in clouds.

*Expected Results:* Quantitative information about droplet spatial distribution and small-scale turbulent mixing in clouds disseminated in scientific publications, increased experience in development of new sensors.

Host: Uniwersytet Warsawski, Poland

Contact person: Prof. Szymon Malinowski (malina@fuw.edu.pl),

Dr. Marta Waclawczyk (marta.waclawczyk@igf.fuw.edu.pl)

### ESR 10: Sub-grid scale modelling of particle transport in Large Eddy Simulations of fluid flows.

*Objectives:* The project is aimed at numerical modelling of transport and interactions of Stokes particles, such as cloud droplets and other aerosols. In high Reynolds number flows, say in a cumulus cloud, there is a gap of 2-4 decades between the Kolmogorov scale and the size of transported droplets. Therefore, even Direct Numerical Simulations of the flow require sub-grid scale (SGS) modelling to account for droplet transport and interactions within one grid cell. In DNS, although not straightforward, this modelling is conceptually tractable as the SGS flow is laminar and, essentially, linear. The SGS modelling of Stokes particles in LES is a major theoretical challenge as the SGS flow, unlike in the DNS, is complex and multi-scale. The project will concern theoretical and numerical modelling of the dispersed phase dynamics in LES simulations of the continuous phase flow. We will focus on the correct modelling of collisions and coalescence of Stokes particles in turbulent flows comparing SGS models in true

LES with filtered DNS simulations (a priori LES analysis) as the reference results.

*Expected Results:* Improved numerical model of droplet coalescence in Large Eddy Simulations. Qualitative understanding of the dependence of particle coalescence rate on the details of the SGS model.

Host: Uniwersytet Warsawski, Poland

*Contact person:* Prof. Szymon Malinowski (<u>malina@fuw.edu.pl</u>), Dr. Marta Waclawczyk (<u>marta.waclawczyk@igf.fuw.edu.pl</u>)

## ESR 11: Lagrangian estimates of entrainment rates in clouds.

*Objectives:* Computing balloon Lagrangian trajectories from LES outputs in shallow cumulus and stratocumulus conditions. Comparison with data from mini radioprobes. Specific adjustment to Lagrangian trajectories will have to be implemented to take into account balloon dynamics. Rates of mixing will be estimated at the interfaces of cloudy and clear air.

*Expected Results:* Transfer of knowledge from microprobes to the weather/climate modelling community. *Host:* Laboratoire de Meteorologie Dynamique, CNRS, France

Contact person: Dr. Fabio D'Andrea (dandrea@lmd.ens.fr), Dr. Jean-Pierre Duvel (jpduvel@lmd.ens.fr)

## ESR 12: Disposable radio-probes.

*Objectives:* Testing on the field of the sensing probes. Pre-processing of data acquired by the ground station. *Expected Results:* Design, prototyping, calibration and testing in laboratory and simulating environment of new disposable radio-probes released by airplanes or UAV. Design and prototyping of an adequate ground station able to receive the data. The testing on the field of the probes previously realized will be performed. The whole data acquisition system (from the probes to the ground station) will be fully tested on the field. A pre-processing of the acquired data will be performed, too.

Host: Envisens Technologies S.r.L., Italy

Contact person: Dr. Marco Allegretti (amministrazione@envisens.com)

# ESR 13: Research and investigation of the performance limits of a direct detection Lidar system developed at PTL, in highly turbulent atmosphere and in real and artificial turbulent environment.

*Objectives:* Experimental and theoretical research on ways to improve the performance of a wind and aerosols Lidar in highly turbulent environment, and inside or in the vicinity of clouds and fog at different density levels.

*Expected Results:* Algorithms and software tools to handle accurate wind measurement and aerosols density in high turbulent flow and high density environment such as fog and clouds. These algorithms and software tools will be implemented and tested in Pentalum's SpiDAR technology and potentially in other Lidar systems. *Host:* Pentalum Ltd, Israel

Contact person: Dr. Sagie Tsadka (Sagie. Tsadka@pentalum.com), Dr. Nathan Sela (nathan.sela@pentalum.com)

# ESR 14: Microelectronic systems for innovative sensors control. Innovative sensors for the measurement of concentration of the chemical species.

*Objectives:* Design and Development of microelectronic systems for innovative sensors control: feasibility studies, die size estimation, power and package definition, application circuit study, breadboard implementation, electrical specifications definition, testing-oriented design definition, optimization of system dimensions and weight, identification of materials with low environmental impact.

*Expected Results:* Design, prototyping and test of microelectronic systems for acquisition and processing of temperature, humidity, pressure, speed, acceleration, vorticity, concentration values. *Host:* Sitael SpA, Italy

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Contact person: Ing.Matteo Angarano (matteo.angarano@sitael.com),

Dr. Patrizia Sferza (patrizia.sforza@sitael.com )

# PHYSICS TODAY JOB OPPORTUNITIES

Job advertisement, Turin July 13<sup>th</sup>, 2016

Ref. Prof. Daniela Tordella, DIMEAS, Politecnico di Torino

daniela.tordella@polito.it, complete-network@polito.it

+39 366 7036 592, +39 011 090 6812

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Application are invited for 14 PHD fellowships under EU Horizon 2020 Marie Sklodowska Curie Action Innovative Training Network **COMPLETE** – **Clo**ud **M**icro**p**hysics-Turbu**le**nce-**Te**lemetry <u>http://cordis.europa.eu/project/rcn/203353\_en.html</u> – which is an inter-multisciplinary training and research network for enhancing the understanding and modeling of atmospheric clouds. We are considering outstanding candidates with background in physics, chemical physics, fluid mechanics high performance computing at large, electronics and telecommunication or other quantitative fields.

Applications must include CV, statement of research interests, list of three people who agreed to write a reference letter, original transcripts of Batchelor and Master University Degrees as well as copy of valid identity documents. Application details can be found at Euraxess - European Commission <u>http://ec.europa.eu/euraxess/index.cfm/jobs/jobDetails/34099915</u>

By the eligibility criteria in the Marie Skłodowska-Curie Actions H2020 Guide for Applicants <u>http://ec.europa.eu/research/participants/data/ref/h2020/other/guides for applicants/h2020-guide-appl16-msca-rise en.pdf</u>, researchers are required to undertake transnational mobility when taking up the appointment. For additional Information contact the network coordinator Prof. Daniela Tordella, Politecnico di Torino, Torino, Italy at <u>complete-network@polito.it</u>.

Applications preferably completed by September 2016, although the search will continue until all positions are filled. **COMPLETE** acts under the European Charter of Researcher which grants equal opportunity to all applicants. Qualified applicants will receive consideration without regard to race, color, sex, gender identity, religion and nationality.

# Nature Jobs

Job advertisement, Turin July 13<sup>th</sup>, 2016

Ref. Prof. Daniela Tordella, DIMEAS, Politecnico di Torino

daniela.tordella@polito.it, complete-network@polito.it

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Application are invited for 14 PHD fellowships under EU Horizon 2020 Marie Sklodowska Curie Action Innovative Training Network **COMPLETE** – **Clo**ud **M**icro**p**hysics-Turbul**e**nce-**Te**lemetry <u>http://cordis.europa.eu/project/rcn/203353\_en.html</u> – which is an inter-multisciplinary training and research network for enhancing the understanding and modeling of atmospheric clouds. We are considering outstanding candidates with background in physics, chemical physics, fluid mechanics high performance computing at large, electronics and telecommunication or other quantitative fields.

Applications must include CV, statement of research interests, list of three people who agreed to write a reference letter, original transcripts of Batchelor and Master University Degrees as well as copy of valid identity documents. Application details can be found at Euraxess - European Commission <u>http://ec.europa.eu/euraxess/index.cfm/jobs/jobDetails/34099915</u>

By the eligibility criteria in the Marie Skłodowska-Curie Actions H2020 Guide for Applicants <u>http://ec.europa.eu/research/participants/data/ref/h2020/other/guides for applicants/h2020-guide-appl16-msca-rise en.pdf</u>, researchers are required to undertake transnational mobility when taking up the appointment. For additional Information contact the network coordinator Prof. Daniela Tordella, Politecnico di Torino, Torino, Italy at <u>complete-network@polito.it</u>.

Applications preferably completed by September 2016, although the search will continue until all positions are filled. **COMPLETE** acts under the European Charter of Researcher which grants equal opportunity to all applicants. Qualified applicants will receive consideration without regard to race, color, sex, gender identity, religion and nationality.



# **PhD Fellowships**

# **COMPLETE - European Network on Cloud Microphysics, Turbulence and Telemetry**

Application are invited for 14 PHD fellowships under EU Horizon 2020 Marie Sklodowska Curie Action Innovative Training Network **COMPLETE** – **Cloud Microphysics-Turbulence-Te**lemetry <u>http://cordis.europa.eu/project/rcn/203353\_en.html</u> – which is an inter-multisciplinary training and research network for enhancing the understanding and modeling of atmospheric clouds. We are considering outstanding candidates with background in physics, chemical physics, fluid mechanics high performance computing at large, electronics and telecommunication or other quantitative fields.

Applications must include CV, statement of research interests, list of three people who agreed to write a reference letter, original transcripts of Batchelor and Master University Degrees as well as copy of valid identity documents. Application details can be found at Euraxess - European Commission <u>http://ec.europa.eu/euraxess/index.cfm/jobs/jobDetails/34099915</u>

By the eligibility criteria in the Marie Skłodowska-Curie Actions H2020 Guide for Applicants <u>http://ec.europa.eu/research/participants/data/ref/h2020/other/guides\_for\_applicants/h2020-guide-appl16-msca-rise\_en.pdf</u>, researchers are required to undertake transnational mobility when taking up the appointment. Details on the Project abstract, Beneficiary and Partner Institutions, Elegibility Criteria, Description of the available positions, Benefits and salary, Recruitment procedure can be found at <u>http://areeweb.polito.it/ricerca/philofluid/includes/news/EUROAXESS\_AD\_H2020-COMPLETE\_11\_07\_2016.pdf</u>. For additional Information contact the network coordinator Prof. Daniela Tordella, Politecnico di Torino, Torino, Italy at <u>complete-network@polito.it</u>.

Applications preferably completed by September 2016, although the search will continue until all positions are filled. **COMPLETE** acts under the European Charter of Researcher which grants equal opportunity to all applicants. Qualified applicants will receive consideration without regard to race, sex, gender identity, religion and nationality.

# ! This job is no longer available

# **PhD Fellowships**

		PhD Fellowships
		COMPLETE - European Network on Cloud Microphysics, Turbulence and Telemetry
COMPL Employ er	EU H2020 COMPLETE Traning Network (Marie Sklodowska Curie Action ITN ETN)	Application are invited for 14 PHD fellowships under EU Horizon 2020 Marie Sklodowska Curie Action Innovative Training Network <b>COMPLETE</b> – <b>Cloud Microphysics</b> - Turbulence- <b>Te</b> lemetry http://cordis.europa.eu/project/rcn/203353_en. html – which is an inter-multisciplinary training and research network for enhancing the understanding and modeling of atmospheric clouds. We are considering outstanding
Location	EUROPE: Italy, Germany, United Kingdom, France,	candidates with background in physics, chemical physics, fluid mechanics high performance computing at large, electronics and telecommunication or other quantitative fields. Applications must include CV, statement of
Salary	Poland, Israel Marie Curie Fellowships: 3110 € montly (gross amount) + mobility allowance 500	research interests, list of three people who agreed to write a reference letter, original transcripts of Batchelor and Master University Degrees as well as copy of valid identity documents. Application details can be found a Euraxess - European Commission http://ec.europa.eu/euraxess/index.cfm/jobs/jo bDetails/34099915
Posted	July 19 2016	By the eligibility criteria in the Marie Skłodowska-Curie Actions H2020 Guide for
Ref	COMPLETE EU netwotk - H2020 MSCA ITN ETN	Applicants http://ec.europa.eu/research/participants/data/ ef/h2020/other/guides_for_applicants/h2020- guide-appl16-msca-rise_en.pdf, researchers
Disciplin e	Physical Sciences, Atmospheric	are required to undertake transnational mobility when taking up the appointment. For additional Information contact the network coordinator Prof. Daniela Tordella, Politecnico

## **PhD Fellowships**

## - European Network on Cloud cs, Turbulence and Telemetry

24

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20.	υ.	2017	

PhD Fellowships job with EU H2020 COMPLETE Traning Network (Marie Sklodowska Curie Action ITN ETN) | 417450

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	Sciences, Climate Change, Computer Sciences, Electrical/Elec tronic Eng, Engineering, Materials Science, Statistics	<ul> <li>di Torino, Torino, Italy at completenetwork@polito.it.</li> <li>Applications preferably completed by September 2016, although the search will continue until all positions are filled.</li> <li>COMPLETE acts under the European Charter of Researcher which grants equal opportunity to all applicants. Qualified applicants will receive consideration without regard to race, color, sex, gender identity, religion and</li> </ul>
Position Type	Full Time	nationality.
Job Type	PhD Fellowship	<ul> <li>More jobs like this</li> <li>Full Time Physical Sciences jobs in France</li> <li>Full Time Atmospheric Sciences jobs in France</li> </ul>

- Full Time Climate Change jobs in France
- Full Time Computer Sciences jobs in France
- Full Time Engineering jobs in France

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# PhD position - Cloud-MicroPhysics-Turbulence-Telemetry

Applications are invited for one **PhD** position ("Early Stage Researchers", ESR) at the **Politecnico di Torino**. This position is funded by the Marie-Skłodowska- Curie Innovative Training Network "COMPLETE – Cloud-MicroPhysics-Turbulence-Telemetry: An inter-multidisciplinary training network for enhancing the understanding and modeling of atmospheric clouds" within the Horizon 2020 Programme of the European Commission.

#### **Project Abstract:**

Clouds are the largest source of uncertainty in weather prediction, climate science, and remain a weak link in modeling atmospheric circulation. This is rooted in the fact that clouds depend on the physical and chemical processes over a huge range of scales, from the collisions of micron-sized droplets and particles to the airflow dynamics on the scales of thousands of meters. Since ambiguities related to representation of clouds in climate models prevail, explorative observations are still needed. The challenge is on the one hand to establish connections across this range of scales, from aerosol and particle microphysics to macro-scale turbulent dynamics in clouds, and on the other to combine knowledge and training across vastly different scientific and engineering disciplines. The aim of COMPLETE is to develop an inter/multidisciplinary training network that will prepare high-potential early stage researchers (ESRs) with both scientific and industrially-oriented skills that will advance our understanding in these multi-scale complex natural phenomena. COMPLETE will vastly improve Europe's position as a global leader in technology, science and innovation to address climate change challenges. The training programme will combine the scientific investigation of specific aspects of cloud physics and related turbulent dynamics with training in key professional skills. This comprises an exceptional experimental programme that includes field experiments, laboratory and numerical simulations, the design and development of advanced fast temperature probes, velocity MEMS and innovative atmospheric mini radio-sondes; all aimed at the production of new, Lagrangian based, cloud fluctuation datasets, required to reduce the fragmentation of results and knowledge in this field.

#### Open PhD position:

#### ESR 1: Transport across warm turbulent cloud interfaces.

*Objectives:* Numerical analysis by using Lagrangian Turbulence spectral solvers of the transport of energy, water vapor and droplets across the interface warm cloud/clear air in a stably and non-stably stratified environment. Lagrangian analysis of small inertial water droplets in suspension (1 - 100  $\mu$ m) across turbulent-non turbulent cloud interfaces and inside warm clouds. The system includes effects associated to buoyancy and condensation/evaporation.

*Expected Results:* Measure of the spreading rate of the vapor across the interface and of the entrainment of dry air or detrainment of moisture. Determination of the flow rates and their modelling. Creation of a Lagrangian database for dispersed small water droplets.

#### Contact persons:

#### Prof. Daniela Tordella

Department of Applied Science and Technology | Politecnico di Torino 10129 Torino Italy Tel (+39) 011 090 6812|, daniela.tordella@polito.it; complete-network@polito.it

#### Dr. Michele Iovieno

Department of Mechanics and Aerospace Engineering | Politecnico di Torino 10129 Torino Italy Tel (+39) 011 090 6853,| michele.iovieno@polito.it ; complete-network@polito.it

#### Other information:

#### Benefits and salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers. The salary, includes a living allowance (3318 €/month before taxes and social security contributions) plus a mobility allowance (600 €/month) and a family allowance (if already married). The PhD funding is for 36 months. In addition to their individual scientific projects, all fellows will benefit from further continuing education, which includes internships and secondments at the other partners of the COMPLETE network, a variety of training modules as well as transferable skills courses and active participation in workshops and conferences.



#### Politecnico di Torino

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#### JOB DETAILS

Published: 9 months ago Application deadline: Unspecified Location: Torino, Italy

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All candidates are invited to write by email to the contact persons, Prof. Daniela Tordella daniela.tordella@polito.it and Dr. Michele Iovieno michele.iovieno@polito.it (including in cc completenetwork@polito.it). Applications must include: CV, statement of research interests. list of three people who agreed to write a reference letter original transcripts of the Batchelor and Master University Degrees copy of valid identity documents. Appicants will need to prove that they are eligible according to the ESR definition, international mobility requirement and English language proficiency.

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#### Eligibility criteria

Applicants need to fully satisfy three eligibility criteria:

**Early-stage researchers** (ESR) are those who are, at the time of recruitment by the host, in the first four years (full- time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate was envisaged.

**Conditions of international mobility of researchers:** Researchers are required to undertake trans-national mobility (i.e. move from one country to another) when taking up the appointment. At the time of selection by the host organization, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organization for more than 12 months in the 3 years immediately prior to their recruitment. Short stays, such as holidays, are not taken into account.

**English language**: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.

#### **Recruitment procedure**

All candidates are invited to write by email to the contact persons, Prof. Daniela Tordella and Dr. Michele Iovieno (including in cc complete-network@polito.it).

#### Applications must include:

CV,

statement of research interests, list of three people who agreed to write a reference letter, original transcripts of the Batchelor and Master University Degrees copy of valid identity documents.

Appicants will need to prove that they are eligible according to the ESR definition, international mobility requirement and English language proficiency.

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# Marie Sklodowska Curie European Program Initial Training Networks

## (Call identifier:H2020-MSCA-2015-ITN, Topic: MSCA-ITN-2015-ETN, Action: MSCA-ITN-ETN)

## Project acronym: COMPLETE; Grant agreement no. 675675 Project full title:

## Cloud-MicroPhysics-Turbulence-Telemetry: An intermultidisciplinary training network for enhancing the understanding and modeling of atmospheric clouds

Clouds are the largest source of uncertainty in weather prediction, climate science, and remain a weak link in modeling atmospheric circulation. This is rooted in the fact that clouds depend on the physical and chemical processes over a huge range of scales, from the collisions of micron-sized droplets and particles to the airflow dynamics on the scales of thousands of meters. Since ambiguities related to representation of clouds in climate models prevail, explorative observations are still needed. The challenge is on the one hand to establish connections across this range of scales, from aerosol and particle microphysics to macro-scale turbulent dynamics in clouds, and on the other to combine knowledge and training across vastly different scientific and engineering disciplines. The aim of COMPLETE is to develop an inter/multidisciplinary training network that will prepare high-potential early stage researchers (ESRs) with both scientific and industriallyoriented skills that will advance our understanding in these multi-scale complex natural phenomena. COMPLETE will vastly improve Europe's position as a global leader in technology, science and innovation to address climate change challenges. The training programme will combine the scientific investigation of specific aspects of cloud physics and related turbulent dynamics with training in key professional skills. This comprises an exceptional experimental programme that includes field experiments, laboratory and numerical simulations, the design and development of advanced fast temperature probes, velocity MEMS and innovative atmospheric mini radio-sondes; all aimed at the production of new, Lagrangian based, cloud fluctuation datasets, required to reduce the fragmentation of results and knowledge in this field.

In the frame of this project, the Politecnico di Torino shall reserve 2 positions for the PhD program in Physics and 2 positions for the PhD program in Electrical, Electronics and Communication Engineering.