Blended Intensive Programme

Relativistic Fluid Dynamics

BIP 2026 • West University of Timișoara

May 25 - 29, 2026, Timișoara

Physics • 6 ECTS • English • For Bachelor, Master and PhD students

Scientific topics

- **Basics of relativistic hydrodynamics** by Dr. Masoud Shokri

  Tutorial : Annamaria Chiarini, Dr. Masoud Shokri

- **Magnetohydrodynamics in astrophysics** by Prof. Luciano Rezzolla

  Tutorial : Annamaria Chiarini, Prof. Luciano Rezzolla

- **Mesoscopic formulation of fluid dynamics** by Dr. Salvatore Plumari

  Tutorial : Vincenzo Nugara, Dr. Salvatore Plumari

- **Hydrodynamics as an effective field theory** by Prof. Francesco Becattini

  Tutorial : Daniele Roselli, Prof. Francesco Becattini

- **Hydrodynamics in heavy ion collision** by Prof. Soeren Schlichting

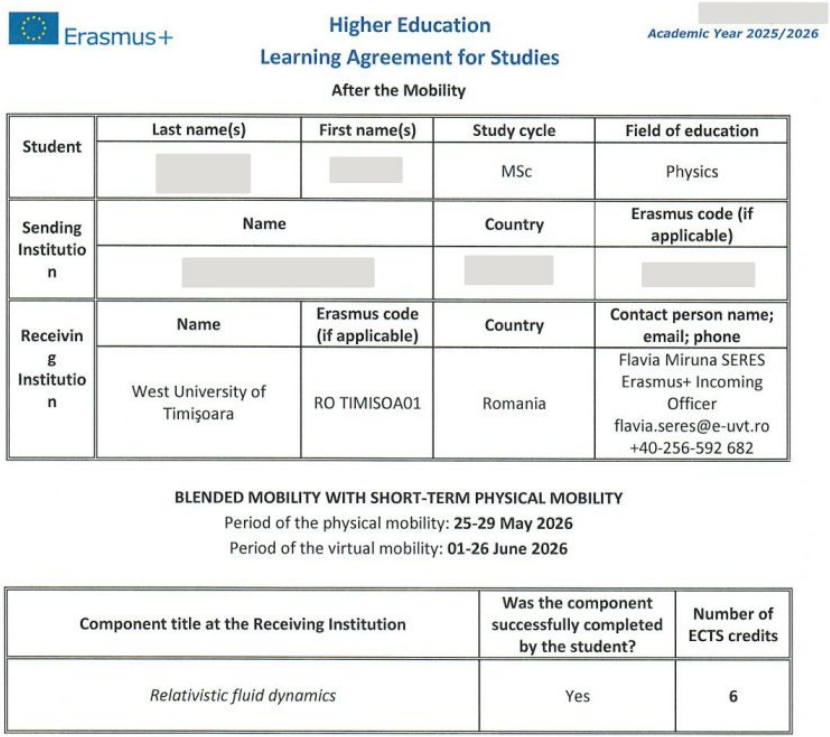
  Tutor : Dr. Victor Ambrus, Prof. Soeren Schlichting

Virtual Component (01-26 June 2026)

- The students form teams and each team selects a project from a list of proposals.
- During the virtual component, the students meet with the tutors for guidance.
- Last session (22-26th June): Students defend their project in order to graduate.
- The projects are mandatory to receive ECTS credits! (as well as Erasmus reimbursement…)

Erasmus documents

- All students must fill out their learning agreements (received at registration)!
- Our Erasmus office provides attendance certificates for both students and lecturers/tutors.
- Please double check with YOUR Erasmus office if you need any other documents to be filled/signed!
- Lunch is provided based on a daily signature list.
- If you won't come to lunch on a specific day, please let us know ASAP!



Erasmus+

Higher Education
Learning Agreement for Studies

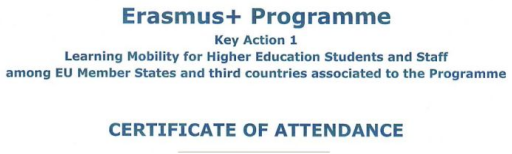
Academic Year 2025/2026

After the Mobility

Student	**Last name(s)**	**First name(s)**	**Study cycle**	**Field of education**
			MSc	Physics
Sending Institution	**Name**		**Country**	**Erasmus code (if applicable)**
Receiving Institution	**Name**	**Erasmus code (if applicable)**	**Country**	**Contact person name; email; phone**
	West University of Timişoara	RO TIMISOA01	Romania	Flavia Miruna SERES Erasmus+ Incoming Officer flavia.seres@e-uvt.ro +40-256-592 682

BLENDED MOBILITY WITH SHORT-TERM PHYSICAL MOBILITY
Period of the physical mobility: **25-29 May 2026**
Period of the virtual mobility: **01-26 June 2026**

Component title at the Receiving Institution	Was the component successfully completed by the student?	Number of ECTS credits
Relativistic fluid dynamics	Yes	6



Erasmus+ Programme
Key Action 1
Learning Mobility for Higher Education Students and Staff
among EU Member States and third countries associated to the Programme

CERTIFICATE OF ATTENDANCE

Organizing Board

- **Host university**

  Universitatea de Vest din Timisoara, Romania
  Conf. Univ. Dr. Victor E. Ambrus victor.ambrus@e-uvt.ro

- **Partner universities**

  P1. Goethe University, Frankfurt am Main, Germany
  PD Dr. Hendrik van Hees hees@itp.uni-frankfurt.de

  P2. University of Florence, Italy
  Prof. Dr. Francesco Becattini becattini@fi.infn.it

  P3. Bielefeld University, Germany
  Prof. Dr. Sören Schlichting schlichting@physik.uni-bielefeld.de

  P4. University of Catania, Italy
  Prof. Dr. Vincenzo Greco vincenzo.greco@dfa.unict.it

Timetable

Monday		Tuesday		Wednesday		Thursday		Friday	
08:00	Start of Registration								
8:45-9:00	Welcome								
09:00-10:50	Basics of relativistic hydro Lecture 1 (Shokri, F206)	09:00-10:50	General relativistic (M)HD Lecture 1 (Rezzolla, F206)	09:00-10:50	Applications of GR(M)HD Lecture (Rezzolla, F206)	09:00-10:50	Hydro as an effective field theory Lecture 1 (Becattini, F206)	09:00-10:50	Hydro as an effective field theory Lecture 2 (Becattini, F206)
10:50-11:10	Coffee break	10:50-11:10	Coffee break	10:50-11:10	Coffee break	10:50-11:10	Coffee break	10:50-11:10	Coffee break
11:10-13:00	Basics of relativistic hydro Tutorial 1 (Shokri, Chiarini, F103)	11:10-13:00	Kinetic theory Lecture 1 (Plumari, F206)	11:10-12:00	Applications of GR(M)HD Tutorial (Rezzolla, Chiarini, F206)	11:10-13:00	Hydro in heavy-ion collisions Lecture 1 (Schlichting, F206)	11:10-13:00	Hydro as an effective field theory Tutorial 2 (Becattini, Roselli, F206)
				12:10-13:00	Kinetic theory Tutorial 1 (Plumari, Nugara, F206)				
13:00-15:00	Lunch break	13:00-15:00	Lunch break	13:00-15:00	Lunch break	13:00-15:00	Lunch break	13:00-15:00	Lunch break
15:00-16:50	Basics of relativistic hydro Lecture 2 (Shokri, F206)	15:00-16:50	General relativistic (M)HD Lecture 2 (Rezzolla, F206)	15:00-16:50	Kinetic theory Lecture 2 (Plumari, F206)	15:00-16:50	Kinetic theory Tutorial 3 (Plumari, Nugara, F103)	15:00-16:50	Hydro in heavy-ion collisions Lecture 2 (Schlichting, F206)
							Hydro as an effective field theory Tutorial 1 (Becattini, Roselli, F103)		
16:50-17:10	Coffee break	16:50-17:10	Coffee break	16:50-17:10	Coffee break	16:50-17:10	Coffee break	16:50-17:10	Coffee break
17:10-19:00	Basics of relativistic hydro Tutorial 2 (Shokri, Chiarini, F206)	17:10-19:00	General relativistic (M)HD Tutorial (Rezzolla, Chiarini, F206	17:10-19:00	Kinetic theory Tutorial 2 (Plumari, Nugara, F103)	17:10-19:00	Hydro in heavy-ion collisions Tutorial 1 (Schlichting, Ambruș, F103)	17:10-19:00	Hydro in heavy-ion collisions Tutorial 2 (Schlichting, Ambruș, F206)

Most activities will take place in F206 (lecture theatre)
Some tutorials take place in F103 (one floor below)
Coffee breaks take place in F205 (next to the lecture theatre)

Important Details

- **Lunch venue:**

  We will have lunch at UVT Bistro Corner, in the university's main building, on the ground floor, opposite to the main

  entrance:

  https://maps.app.goo.gl/DctByUv3HfdHxgFc7

Organizers

- **Organizing Committee**

Victor E. Ambruș (Timișoara, Romania; chair)

Hendrik van Hees (Frankfurt, Germany; co-chair)

Sören Schlichting (Bielefeld, Germany; co-chair)

Vincenzo Greco (Catania, Italy; co-chair)

Francesco Becattini (Florence, Italy; co-chair)

- **Local Organizing Committee**

Victor E. Ambruș (Timișoara, Romania)

Pracheta Singha (Timișoara, Romania)

Rajeev Singh (Timișoara, Romania)

Sergiu Busuioc (Timișoara, Romania)

Marius Ștef (Timișoara, Romania)

- **Organizational and scientific assistants from UVT**

Moulindu Kundu, Andru Buga, Iulia Daia, Nicoleta Delia Ivanovici, Elena Florina Danci

- **Student volunteers:**

Gabriela Iavorschi, Alin Galea, Vlad Floarea, Istvan Laszlo, Cristiana Kulik, Leo Ciobanu, Robert Ghibescu,


THANK YOU
AND ENJOY!