



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA



FONDAZIONE  
RICERCA BIOMEDICA  
AVANZATA ONLUS  
ISTITUTO VENETO  
DI MEDICINA MOLECOLARE  
VIMM



VENICEASIAGOPADOVA2017

# SUMMER SCHOOL 2018

## VENICE - ASIAGO - PADOVA

(August 19<sup>th</sup> – September 09<sup>th</sup>)



Dipartimento  
di Fisica  
e Astronomia  
Galileo Galilei

 **Centro Linguistico di Ateneo**



OSSERVATORIO  
ASTRONOMICO DI PADOVA

# Science and Art in Italian Culture: from History to Modern Times

**Sponsor:** University of Padova

ShanghaiTech University

Venetian Institute of Molecular Medicine

**Course Director:** Ernesto Carafoli

**Organizing Committee:** Lucia Regolin, Denis Bastieri, Kim Anne Barchi, Veronica Santini

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# Introduction

The Summer School is part of the collaboration agreement signed between ShanghaiTech University and the University of Padova. Its aim is to offer a variety of classes in order to expose the participating students to a panorama of Italian culture, from the Medieval times to the present days. It will be broad in content, including topics from both Art and Science.

The Course will focus on the historical role and the modern developments of Art and Science in Italy and in particular of the part of Italy that, in the old days, was known as the Republic of Venice, which had in Venice, a UNESCO World Heritage Site, its glorious centre of artistic culture, and in the University of Padova an exceptional scientific centre.

The Course will be organised in three separate locations: Venice for the first portion, Asiago for the second and Padova for the final third. In Venice students will learn about Art, spanning from music to visual art, architecture and literature. The venue will be a beautiful, and historically relevant, Foundation (Fondazione Crociferi). This part of the Course consists of programme of lectures, but also of a number of activities in Venice, e. g. , visits to museum and other artistical landmark

The setting of the second part of the Course will be the quaint little city of Asiago, a renowned mountain vacation resort where the University of Padova has its Astronomical Observatory. Here the Course will deal with Science. The lectures will offer an across-the-board view of scientific topics, underlying those that have particular significance for the University of Padova. Science has been outstanding in the history of the University of Padova: names such as Galileo, Vesalius, Harvey, Morgagni are sufficient to understand why. The programme in Asiago will also include lectures on interdisciplinary topics, but will also include numerous activities, including a night at the Observatory.

Finally, four days will be dedicated to Padova, to visit some University Institutes and some of the city's most important cultural landmarks. The portion of the course in Padova will schedule mostly lectures of interdisciplinary character, and will include a guided visit to the historical central building of the University

Some tours will be also organised leaving from Asiago. Some examples are: a visit to Vicenza, nominated UNESCO World Heritage Site in 1994, home of some of the most important architectural landmarks of Palladio, and to Verona, where the students will attend an opera evening in the famous roman amphitheater.

The Course will be open to Italian students who will audit the lectures, in order to promote contacts between Chinese and Italian students and strengthen the overall academic relationship.

Considering Shanghai Tech's requirements for student credits, the total number of lectures in the course (considering the minimum 80% of lectures the student must take) will add up to 3 credit points.

The credits will be awarded considering attendance and the results of an evaluation test. With regards to the latter, students will be asked to write two essays (up to 2000 words), one on any of the general culture topics of the Course, and the other on a chosen science-related topic. The essays will be handed-in two weeks after the end of the Course, and will be evaluated and graded by the Members of the Organizing Committee and by selected Lecturers.

A final official ceremony will be held at the University of Padova, in one of its historical halls, on August 5<sup>th</sup>. On such occasion, students will be given a certificate attesting their participation in the Summer School.

## 19 August 2018 – Venice, Italy

(Tours, visits, and other collateral activities are not listed)

11:30 12:45	Lecture	Kim Anne Barchi	Prof. Kim Anne Barchi	<i>"Italy for Beginners"</i>
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## 20 August 2018 – Venice, Italy

9:00 10:15	Lecture	Crociferi Foundation	Prof. Veronica Santini	<i>"Italian Art Glossary: an illustrated Journey through the main Characters, Symbols and Styles of Italian Art"</i>
10:30 12:00	Lecture	Crociferi Foundation	Prof. Veronica Santini	<i>"Italian Art Glossary: an illustrated Journey through the main Characters, Symbols and Styles of Italian Art"</i>
14:00 15:00	Lecture	Crociferi Foundation	Prof. Andrea Baldini	<i>"Perspectives in Western Philosophy"</i>

## 21 August 2018 – Venice, Italy

9:00 10:15	Lecture	Crociferi Foundation	Prof. Isabella Colpo	<i>“Gods and Heroes of ancient Roman Religion as Subject in Italian Art - 1”</i>
10:30 11:30	Lecture	Crociferi Foundation	Prof. Francesco Veronese	<i>“The cult of Saints in Western Religion”</i>
11:30 12:30	Lecture	Crociferi Foundation	Prof. Isabella Colpo	<i>“Gods and Heroes of ancient Roman Religion as Subjects in Italian Art - 2”</i>

## 22 August 2018 – Venice, Italy

9:00 10:15	Lecture	Crociferi Foundation	Prof. Ilaria Andreoli	<i>"Four centuries of art in Venice. Painting."</i>
10:30 12:00	Lecture	Crociferi Foundation	Prof. Ilaria Andreoli	<i>"Four centuries of art in Venice. Sculpture."</i>
14:00 15:00	Lecture	Crociferi Foundation	Prof. Cinzia Sada	<i>"Venetian Glass Art and Science"</i>



## 23 August 2018 – Venice, Italy

9:00 10:15	Lecture	Crociferi Foundation	Prof. Paola Pellegrini	<i>"A very special Water Town: the Construction of Venice"</i>
10:30 12:00	Lecture	Crociferi Foundation	Prof. Paola Pellegrini	<i>"Palladio, one of the most influential Architects of the World"</i>

## 25 August 2018 – Venice, Italy

9:00 10:15	Workshop	Crociferi Foundation	Prof. Kim Anne Barchi	<i>Academic Writing</i>
10:30 12:00	Workshop	Crociferi Foundation	Prof. Kim Anne Barchi and Margherita Bonfiglio	<i>Public Speaking across cultural Differences</i>

## 27 August 2018 – Asiago, Italy

9:00 10:00	Lecture	Rigoni Stern Institute	Prof. Giancarlo Setti	<i>"Origin and Evolution of the Universe"</i>
10:00 11:00	Lecture	Rigoni Stern Institute	Prof. Cesare Barbieri	<i>"Search for Extra-Terrestrial Life"</i>
11:15 12:15	Lecture	Rigoni Stern Institute	Prof. Carlo Smeda	<i>"Optical Communications: from Prehistoric Times to Modern Times"</i>

## 28 August 2018 – Asiago, Italy

9:00 10:00	Lecture	Rigoni Stern Institute	Prof. Carlo Doglioni	<i>"Geodynamics and Earthquakes"</i>
10:00 11:00	Lecture	Rigoni Stern Institute	Prof. Fabrizio Nestola	<i>"The Origin of Ocean"</i>
11:15 12:15	Lecture	Rigoni Stern Institute	Prof. Ivano Bertini	<i>"Oceans from the Stars"</i>

## 29 August 2018 – Asiago, Italy

9:00 10:00	Lecture	Rigoni Stern Institute	Prof. Giorgio Manzi	<i>“Apes-like Ancestors and Extinct Humans of the Deep Time”</i>
10:00 11:00	Lecture	Rigoni Stern Institute	Prof. Guido Barbuiani	<i>“Genetics in the Study of Human Evolution”</i>
11:15 12:15	Lecture	Rigoni Stern Institute	Prof. Claudio Tuniz	<i>“New Clocks and Microscopes to Reconstruct Human History”</i>
14:30 15:30	Lecture	Rigoni Stern Institute	Prof. Francesco D’Errico	<i>“Origin of symbolic thinking in the Paleolithic Times”</i>
15:45 17:00	Lecture	Rigoni Stern Institute	Prof. Giuseppe O. Longo	<i>“Cultural Evolution: Towards The Post-Human Homo Technologicus Comes of Age”</i>

## 30 August 2018 – Asiago, Italy

9:00 10:00	Lecture	Rigoni Stern Institute	Prof. Ernesto Carafoli	<i>"The Dark Side of Science"</i>
10:00 11:00	Lecture	Rigoni Stern Institute	Prof. Enrico Bucci	<i>"Fabrication, Falsification and Plagiarism: detection and prevention"</i>
11:15 12:15	Lecture	Rigoni Stern Institute	Prof. Giuseppe Sartori	<i>"Neuropsychology of scientific Misconduct"</i>

## 31 August 2018 – Asiago, Italy

15:00 16:00	Lecture	Rigoni Stern Institute	Prof. Andrea Sgarro	<i>“Origin and Development of Informatics”</i>
16:15 17:30	Lecture	Rigoni Stern Institute	Prof. Bert Sakmann	<i>“From Single Cells and Single Columns to Cortical Networks”</i>

## 01 September 2018 – Asiago, Italy

9:00 10:00	Lecture	Rigoni Stern Institute	Prof. Denis Bastieri	<i>"Ashen Light"</i>
10:00 11:00	Lecture	Rigoni Stern Institute	Prof. Franco Simonetto	<i>"The Discovery of Higgs' Boson and the Search for new Phenomena at the LHC "</i>
11:00 12:00	Lecture	Rigoni Stern Institute	Prof. Stefano Debei	<i>"Space Explorations: emphasis on Mars"</i>
13:30 14:30	Lecture	Rigoni Stern Institute	Prof. Samir Suweis	<i>"Statistical Physics from startling Flocks to Eco-Networks"</i>
21:00 22:30	Workshop	Astronomical Observatory of Asiago	Prof. Siviero and Prof. Bastieri	<i>An evening at the telescope</i>



## 03 September 2018 – Asiago, Italy

9:00 10:00	Lecture	Rigoni Stern Institute	Prof. Massimo Turatto	<i>"From the Chinese's Supernova AD 1054 (Crab Nebula) to Dark Energy"</i>
10:00 11:00	Lecture	Rigoni Stern Institute	Prof. Gabriele Vedovato	<i>"First Observations of Gravitational Wave Signals"</i>

## 04 September 2018 – Transfer from Asiago to Padova, Italy

09:00 11:00	Lecture	Rigoni Stern Institute	Prof. Lucia Regolin	<i>"Number Space Mapping in the Newborn Chick"</i>
11:15 12:30	Lecture	Rigoni Stern Institute	Prof. Marco Bertamini	<i>"Mirror Cognition: What we can learn from what People cannot learn about Mirrors."</i>

## 05 September 2018 – Padova, Italy

9:00 10:00	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Luigi Gallimberti	<i>"Solving the Problem of Cocaine Addiction"</i>
10:00 11:00	Discussion	Centro Linguistico di Ateneo, UniPd	Summer School organisers and students	<i>Open discussion on lectures + Q&amp;A</i>
11:15 12:30	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Fausto Caruana	<i>"The language of emotional displays"</i>
14:30 15:30	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Rodolfo Costa	<i>"Circadian Rhythms"</i>
15:30 16:30	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Sara Montagnese	<i>"Why do we sleep?"</i>
16:45 17:45	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Andrea Pilastro	<i>"Sex and Evolution»"</i>

## 06 September 2018 – Padova, Italy

9:00 10:30	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Pierluigi Luisi	<i>"What is Life?"</i>
10:45 12:00	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Diego Poli	<i>"The cultural interplay between China and the West: from Marco Polo to Matteo Ricci"</i>
14:00 15:00	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Sergio Durante	<i>"Flashes of Music history in the Venetian State – 1"</i>
15:15 17:15	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Sergio Durante	<i>"Flashes of Music history in the Venetian State – 2"</i>
17:30 19:00	Lecture	Centro Linguistico di Ateneo, UniPd	Prof. Gian Piero Brunetta	<i>"Cinema and its Impact on Society"</i>

## 08 September 2018 – Padova, Italy

10:30 11:30	Lecture	University of Padova, Bo Palace, Aula Nievo	Prof. Giulio Giorello	<i>“Philosophical Freedom in Scientific Research and Art Practice: Examples from the Italian Culture”</i>
11:45 13:00	Certificate s	University of Padova, Bo Palace, Aula Nievo	Summer School organisers and students	Attendance certificates to Summer School Students

# Summary of the Lectures

(47, but some will take more than one hour)

The lecturers are recognized experts in their fields. Some will need more than one lecture to complete the coverage of their topics. They will provide short abstracts of their presentations, and some references (possibly with reprints) to the topics they will cover. The total number of hours/Lectures will be 60 or more.

## Art and General Culture

*Four Centuries of Art in Venice: Painting* - Ilaria Andreoli

*Four Centuries of Art in Venice: Sculpture* - Ilaria Andreoli

*Perspectives in Western Philosophy* - Andrea Baldini

*Italy for Beginners* - Kim Anne Barchi

*English for Academic Purposes* - Kim Anne Barchi

*English for Presentations* - Kim Anne Barchi

*Gods and Heroes of Ancient Roman Religion as Subject in Italian Art* - Isabella Colpo

*Flashes of Music History in the Venetian State* - Sergio Durante

*A very special Water Town: the Construction of Venice* - Paola Pellegrini

*Palladio, one of the most influential Architects of the World* - Paola Pellegrini

*Lecture and Visit of Palladio's landmarks in Vicenza* - Paola Pellegrini

*Venetian Glass Art and Science* - Cinzia Sada

*Italian Art Glossary: an illustrated Journey through the main Characters, Symbols and Styles of Italian Art* - Veronica Santini

*The cult of Saints in Western Religion* - Francesco Veronese



General  
Culture  
and Arts

*Comets from Ancient China to Modern Astrophysics* - Cesare Barbieri  
*Ashen Light* - Denis Bastieri  
*Space Exploration: Focus on Mars* - Stefano Debei  
*Origin and Evolution of the Universe* - Giancarlo Setti

Astrophysics

*The Discovery of Higgs' Boson and the Search for new Phenomena at the LHC* - Franco Simonetto  
*Optical Communications: from Prehistoric Times to Modern Times* - Carlo Sameda  
*Statistical Physics: from startling Flocks to Eco-Networks* - Samir Suweis  
*From the Chinese's Supernova AD 1054 (Crab Nebula) to Dark Energy* - Massimo Turatto  
*First Observations of gravitational Wave Signals* - Gabriele Vedovato

Physics

*Geodynamics and Earthquakes* – Carlo Doglioni  
*The endogenous Origin of Oceans* - Fabrizio Nestola  
*Oceans from the Stars* - Ivano Bertini

Geology

*Origin and Development of Informatics* - Andrea Sgarro

Informatics

*Genetics in the Study of Human Evolution* - Guido Barbuiani  
*Symbolic thinking of the Neandertals* - Francesco D'Errico  
*Cultural Evolution towards the Post-Human* - Giuseppe Longo  
*Apes-like Ancestors and Extinct Humans of the Deep Time* - Giorgio Manzi  
*New Clocks and Microscopes to Reconstruct Human History* - Claudio Tuniz

Paleo-  
anthropology

*Circadian Rhythms* - Rodolfo Costa  
*Why do we sleep?* - Sara Montagnese  
*What is Life?* - Pier Luigi Luisi  
*Sex and Evolution* - Andrea Pilastro

Biology

*Mirror Cognition What we can learn from what People cannot learn about Mirrors.* - Marco Bertamini  
*The Language of emotional Displays* – Fausto Caruana  
*Solving the Problem of Cocaine Addiction* - Luigi Gallimberti  
*Number Space Mapping in the Newborn Chick* - Lucia Regolin  
*From Single Cells and Single Columns to Cortical Networks* - Bert Sakmann

Neuroscience

*Cinema and its Impact on Society* - Gian Piero Brunetta  
*Fabrication, Falsification and Plagiarism: Detection and Prevention* - Enrico Bucci  
*Scientific Frauds and Errors: the Dark Side of Science* - Ernesto Carafoli  
*Philosophical Freedom in Scientific Research and Art Practice: Examples from Italian Culture* Giulio Giorello  
*The Cultural Interplay between China and the West: from Marco Polo to Matteo Ricci* - Diego Poli  
*Neuropsychology of scientific Misconduct* - Giuseppe Sartori

Inter-  
disciplinary