



# Cancer Development And Complexity 2019

Lake Como School of Advanced Studies, May 27-31, 2019

[Home](#)

[Speakers](#)

[Program](#)

[Accommodation](#)

[Registration](#)

[Venue](#)

[Monday 27th, Special Day Honoring Bud Mishra](#)



## Home

Cancer is a complex disease involving several intertwined phenomena and events, which collude to unleash the tumor cells inherent programs to proliferate, live, and move; thus, it is the malfunction of the biomolecular machinery responsible for the "checks and balances", normally governed by various complex feedback loops among a population of various cell types. Breakdown of this machinery leads to uncontrolled growth of a cell population being selected by evolutionary pressure that ultimately costs the very survival of the host.

Understanding the many intricacies of all these interactions at the subcellular, cellular and tissue levels has greatly benefitted from the ever-improving applications of algorithmic, statistical and mathematical modeling tools. Moreover, during the past 15 years, new measurement technology for gene expression and, more recently, "deep" genome sequence data, have produced vast amount of data, waiting to be analyzed to deliver new interpretations. The design of novel "wet" experiments and appropriately matched algorithmic, statistical and mathematical modeling tools are expected to become the key to successful oncological science and practice.

The Workshop and School on Cancer Development and Complexity seeks to convene researchers from various related disciplines to explore multiple facets of the challenges posed by cancer a "disease of the systems." The workshop will provide opportunities for the researchers to exchange new ideas and viewpoints, forge new collaborations and train the next generation of young scientists.

Participants are encouraged to present their work in two sessions and poster presentations that will be held during the workshop.

The program will provide an introduction to both cancer biology and mathematical and statistical methods used in analyzing the datasets currently being produced by several laboratories around the world. Next the program will provide an opportunity to interact with world renowned cancer and bioinformatics researchers and the chance for attendees to present their current work. Finally, all the attendees will receive a certificate of completion of the School.

### School Directors

- **Marco Antonioti**  
BIMIB, Dipartimento di Informatica, Sistemistica e Comunicazione, Università degli Studi di Milano-Bicocca, Milan, Italy.
- **Alex Graudenzi**  
Institute of Molecular Bioimaging and Physiology of the Italian National Research Council (IBFM-CNR)
- **Bud Mishra**  
Courant Institute of Mathematical Sciences, and Tandon School of Engineering, NYU, New York, NY, USA.

### Steering Committee

- **Marco Antonioti**  
BIMIB, Dipartimento di Informatica, Sistemistica e Comunicazione, Università degli Studi di Milano-Bicocca, Milan, Italy.
- **Riccardo Bellazzi**  
Università degli Studi di Pavia, Pavia, Italy.
- **Charles Cantor**  
Agena Biosciences, Sequenom, Retrotope and Boston University, USA.
- **Alex Graudenzi**  
Institute of Molecular Bioimaging and Physiology of the Italian National Research Council (IBFM-CNR)
- **Bud Mishra**  
Courant Institute of Mathematical Sciences, and Tandon School of Engineering, NYU, New York, USA.
- **Giulio Pavesi**  
Università degli Studi di Milano, Milan, Italy.
- **Giovanni Porta**  
Università degli Studi dell'Insubria, Varese, Italy.

### Institutions

- BIMIB, Dipartimento di Informatica, Sistemistica e Comunicazione, Università degli Studi di Milano-Bicocca, Milan, Italy
- [Fondazione Alessandro Volta](#), Como, Italy

### Local Organization

- **Davide Maspero** (BIMIB, Univ. Milano-Bicocca)
- **Fabrizio Angaroni** (BIMIB, Univ. Milano-Bicocca)

### Web Sites

**Lake Como School**  
<https://cdac2019.lakecomoschool.org>  
**Bimib**  
<http://bimib.disco.unimib.it>

## Workshop and School on Cancer, Development and Complexity CDAC 2019

**LAKE COMO SCHOOL OF ADVANCED STUDIES**

**Villa del Grumello**  
Como, Italy

**May 28 – May 31, 2019**

Cancer is a complex disease involving several intertwined phenomena and events, which collude to unleash the tumor cells inherent programs to proliferate, live, and move; thus, it is the malfunction of the biomolecular machinery responsible for the "checks and balances", normally governed by various complex feedback loops among a population of various cell types. Breakdown of this machinery leads to uncontrolled growth of a cell population being selected by evolutionary pressure that ultimately costs the very survival of the host.

Understanding the many intricacies of all these interactions at the subcellular, cellular and tissue levels has greatly benefitted from the ever-improving applications of algorithmic, statistical and mathematical modeling tools. Moreover, during the past 15 years, new measurement technology for gene expression and, more recently, "deep" genome sequence data, have produced vast amount of data, waiting to be analyzed to deliver new interpretations. The design of novel "wet" experiments and appropriately matched algorithmic, statistical and mathematical modeling tools are expected to become the key to successful oncological science and practice.

The Workshop and School on Cancer Development and Complexity seeks to convene researchers from various related disciplines to explore multiple facets of the challenges posed by cancer a "disease of the systems." The workshop will provide opportunities for the researchers to exchange new ideas and viewpoints, forge new collaborations and train the next generation of young scientists.

Participants are encouraged to present their work in two sessions and poster presentations that will be held during the workshop.

The program will provide an introduction to both cancer biology and mathematical and statistical methods used in analyzing the datasets currently being produced by several laboratories around the world. Next the program will provide an opportunity to interact with world renowned cancer and bioinformatics researchers and the chance for attendees to present their current work. Finally, all the attendees will receive a certificate of completion of the School.

### Keynote speakers

**Charles Cantor**  
Agena Biosciences, Sequenom, Retrotope and Boston University USA

**Alessandra Carbone**  
Laboratory of Computational and Quantitative Biology, Sorbonne Université, Paris, France

**Isabella Castiglioni**  
Institute of Bioimaging and Molecular Physiology IBFM-CNR, Milan, Italy

**Davide Cittaro**  
San Raffaele Scientific Institute and Hospital, Milan, Italy

**Sui Huang**  
Institute for Systems Biology, Seattle, USA

**Enzo Medico**  
IRCC Candiolo, Turin, Italy

**Bud Mishra**  
Courant Institute of Mathematical Sciences and Tandon School of Engineering, NYU, USA

**Laxmi Parida**  
IBM T.J. Watson Laboratory, Yorktown Heights, NY, USA

**Tamar Schlick**  
Courant Institute of Mathematical Sciences and Dept. of Chemistry, NYU, USA

**Eduardo Sontag**  
Electrical and Computer Engineering & Bioengineering, Northeastern University, USA

**Ioannis Tsamardinos**  
Computer Science Department, University of Crete, Greece

**SCHOOL OF STUDIES MILANO-BICOCCA**

**CISE**  
CENTRO DI RICERCA IN SISTEMI ELETTRICI E COMUNICAZIONE

**NYU**

### School Directors

**Marco Antonioti**  
University of Milan-Bicocca, Italy

**Alex Graudenzi**  
IBFM-CNR, Italy

**Bud Mishra**  
Courant Institute, NYU, USA

### Local organization

**Fabrizio Angaroni**  
**Davide Maspero**  
University of Milan-Bicocca, Italy

**Francesco Camporini**  
Fondazione Alessandro Volta

### Registration and Contacts

web: <http://cdac2019.lakecomoschool.org/>  
mail: [marco.antonioti@unimib.it](mailto:marco.antonioti@unimib.it)







# Cancer Development And Complexity 2019

Lake Como School of Advanced Studies, May 27-31, 2019

[Home](#)[Speakers](#)[Program](#)[Accommodation](#)[Registration](#)[Venue](#)[Monday 27th, Special Day Honoring Bud Mishra](#)

## Speakers

- **Charles Cantor**  
Agena Biosciences, Sequenom, Retrotope and Boston University, USA
- **Alessandra Carbone**  
Laboratory of Computational and Quantitative Biology, Sorbonne Université, Paris, France
- **Isabella Castiglioni**  
Institute of Bioimaging and Molecular Physiology of the National Research Council (IBFM-CNR), Milan, Italy
- **Davide Cittaro**  
Ospedale San Raffaele, Milan, Italy
- **Sui Huang**  
Institute for Systems Biology, Seattle, USA
- **Enzo Medico**  
IRCC Candiolo, Turin, Italy
- **Bud Mishra**  
Courant Institute of Mathematical Sciences and Tandon School of Engineering, NYU, USA
- **Laxmi Parida**  
IBM T.J. Watson Laboratory, Yorktown Heights, NY, USA
- **Tamar Schlick**  
Courant Institute of Mathematical Sciences and Dept. of Chemistry, New York University, New York, NY, USA
- **Eduardo Sontag**  
Electrical and Computer Engineering & Bioengineering, Northeastern University, USA
- **Ioannis Tsamardinos**  
Computer Science Department, University of Crete, Greece



# Cancer Development And Complexity 2019

*Lake Como School of Advanced Studies, May 27-31, 2019*

[Home](#)[Speakers](#)[Program](#)[Accommodation](#)[Registration](#)[Venue](#)[Monday 27th, Special Day Honoring Bud Mishra](#)

## Accommodation

Important! For all school speakers and attendees!

We have learned that third part companies are contacting school speakers and attendees offering to make travel arrangements (hotel and flight bookings) on our behalf and asking for credit card details in order to proceed. PLEASE NOTE these agencies are not authorized by us, this is most likely a fraud.

For any doubt do not hesitate to contact us. Thank you!



# Cancer Development And Complexity 2019

Lake Como School of Advanced Studies, May 27-31, 2019

[Home](#)[Speakers](#)[Program](#)[Accommodation](#)[Registration](#)[Venue](#)[Monday 27th, Special Day Honoring Bud Mishra](#)

## Registration

- Registration fees include participation to the school, social events, coffee breaks and school material.
- Registration: 350.00 € until April 30th, 2019.
- Registration: 400.00 € afterward (\*) and on site.
- Daily, on site registration: 100 € (social dinner extra)

(\*) Participants affiliated with the four Universities supporting the Lake Como Schools (Milano Statale, Pavia, Milano Bicocca and Insubria) qualify for a 320.00 € registration fee.

All fees include VAT.

*Registrations are closed.*

## Venue

Lake Como School of Advanced Studies, **Villa del Grumello**, Como, Italy.

Placed in a central position within Europe, close to four international airports, it is hosted in an outstanding old noble palace located on the shoreline of beautiful Lake Como. The School is an international research facility running short term programs on a wide range of interdisciplinary subjects, sharing a common focus on complex systems. The School attracts leading scholars in different fields including: physics, biology, economics, sociology, geopolitics, education, environmental and development studies, to engage in collaborative research. In small teams, visitors explore questions at the cutting edge of science and knowledge. In a context of globalization and in front of the increasing interaction between various kinds of networks, the analysis of complex systems offers insights into economic development, social cohesion and the environment on many geographical scales.



**Venue:** The school will be held at Villa del Grumello, Via per Cernobbio 11, Como (Italy).

**HOW TO GET THERE:** <http://lakecomoschool.org/contact/travel-info/>

Villa del Grumello is 20 min on foot from Como city center – you can also take a bus, lines 6 and 11 (bus stop: "Como Via Regina Piscine Villa Olmo", just after "Villa Olmo").

From the main Train Station (Como S. Giovanni), the nearest bus stop to catch line 6 and 11 is "Piazzale Rocchetto".



[View larger map](#)



## Monday 27th, Special Day Honoring Bud Mishra

Bud Mishra: An “Impure” Mathematician doing (Computer) Science, Biology, and Other Things



On Monday, May 27th, there will be an afternoon dedicated to Bud Mishra, in occasion of (one of) his birthday.

We will start with an aperitif/lunch at 12:30 to continue with informal talks and presentations for the afternoon. Bud Mishra will hold a talk before we will reconvene for dinner at the Restaurant “L’Antica Riva” in Como.

The preliminary program is the following.

Mon May 27	
12:30	<b>Registration Aperitif and Lunch</b>
13:30	Welcome by Marco Antoniotti
13:45	Iuliana Laza
14:15	Charles Cantor
14:45	Carla Piazza
15:00	Pasquale Caianiello
15:15	Alberto Policriti
15:30	<b>Coffee break</b>
16:00	<b>Bud Mishra</b>
19:30	<b>Dinner (Como)</b>

Note that Bud Mishra’s presentation, titled Logic in Time of Cancer will be held in the signature “SpamHaus” format.

Dinner will be at the Restaurant [L’Antica Riva](#).

Join all the revelers in celebrating (one of) Bud’s Birthday!





# Cancer Development And Complexity 2019

Lake Como School of Advanced Studies, May 27-31, 2019

[Home](#)

[Speakers](#)

[Program](#)

[Accommodation](#)

[Registration](#)

[Venue](#)

[Monday 27th, Special Day Honoring Bud Mishra](#)



## Home

Cancer is a complex disease involving several intertwined phenomena and events, which collude to unleash the tumor cells inherent programs to proliferate, live, and move; thus, it is the malfunction of the biomolecular machinery responsible for the "checks and balances", normally governed by various complex feedback loops among a population of various cell types. Breakdown of this machinery leads to uncontrolled growth of a cell population being selected by evolutionary pressure that ultimately costs the very survival of the host.

Understanding the many intricacies of all these interactions at the subcellular, cellular and tissue levels has greatly benefitted from the ever-improving applications of algorithmic, statistical and mathematical modeling tools. Moreover, during the past 15 years, new measurement technology for gene expression and, more recently, "deep" genome sequence data, have produced vast amount of data, waiting to be analyzed to deliver new interpretations. The design of novel "wet" experiments and appropriately matched algorithmic, statistical and mathematical modeling tools are expected to become the key to successful oncological science and practice.

The Workshop and School on Cancer Development and Complexity seeks to convene researchers from various related disciplines to explore multiple facets of the challenges posed by cancer a "disease of the systems." The workshop will provide opportunities for the researchers to exchange new ideas and viewpoints, forge new collaborations and train the next generation of young scientists.

Participants are encouraged to present their work in two sessions and poster presentations that will be held during the workshop.

The program will provide an introduction to both cancer biology and mathematical and statistical methods used in analyzing the datasets currently being produced by several laboratories around the world. Next the program will provide an opportunity to interact with world renowned cancer and bioinformatics researchers and the chance for attendees to present their current work. Finally, all the attendees will receive a certificate of completion of the School.

### School Directors

- **Marco Antonioti**  
BIMIB, Dipartimento di Informatica, Sistemistica e Comunicazione, Università degli Studi di Milano-Bicocca, Milan, Italy.
- **Alex Graudenzi**  
Institute of Molecular Bioimaging and Physiology of the Italian National Research Council (IBFM-CNR)
- **Bud Mishra**  
Courant Institute of Mathematical Sciences, and Tandon School of Engineering, NYU, New York, NY, USA.

### Steering Committee

- **Marco Antonioti**  
BIMIB, Dipartimento di Informatica, Sistemistica e Comunicazione, Università degli Studi di Milano-Bicocca, Milan, Italy.
- **Riccardo Bellazzi**  
Università degli Studi di Pavia, Pavia, Italy.
- **Charles Cantor**  
Agena Biosciences, Sequenom, Retrotope and Boston University, USA.
- **Alex Graudenzi**  
Institute of Molecular Bioimaging and Physiology of the Italian National Research Council (IBFM-CNR)
- **Bud Mishra**  
Courant Institute of Mathematical Sciences, and Tandon School of Engineering, NYU, New York, USA.
- **Giulio Pavesi**  
Università degli Studi di Milano, Milan, Italy.
- **Giovanni Porta**  
Università degli Studi dell'Insubria, Varese, Italy.

### Institutions

- BIMIB, Dipartimento di Informatica, Sistemistica e Comunicazione, Università degli Studi di Milano-Bicocca, Milan, Italy
- [Fondazione Alessandro Volta](#), Como, Italy

### Local Organization

- **Davide Maspero** (BIMIB, Univ. Milano-Bicocca)
- **Fabrizio Angaroni** (BIMIB, Univ. Milano-Bicocca)

### Web Sites

**Lake Como School**  
<https://cdac2019.lakecomoschool.org>  
**Bimib**  
<http://bimib.disco.unimib.it>

## Workshop and School on Cancer, Development and Complexity CDAC 2019

**LAKE COMO SCHOOL  
OF ADVANCED STUDIES**

**Villa del Grumello  
Como, Italy**

**May 28 – May 31, 2019**

Cancer is a complex disease involving several intertwined phenomena and events, which collude to unleash the tumor cells inherent programs to proliferate, live, and move; thus, it is the malfunction of the biomolecular machinery responsible for the "checks and balances", normally governed by various complex feedback loops among a population of various cell types. Breakdown of this machinery leads to uncontrolled growth of a cell population being selected by evolutionary pressure that ultimately costs the very survival of the host.

Understanding the many intricacies of all these interactions at the subcellular, cellular and tissue levels has greatly benefitted from the ever-improving applications of algorithmic, statistical and mathematical modeling tools. Moreover, during the past 15 years, new measurement technology for gene expression and, more recently, "deep" genome sequence data, have produced vast amount of data, waiting to be analyzed to deliver new interpretations. The design of novel "wet" experiments and appropriately matched algorithmic, statistical and mathematical modeling tools are expected to become the key to successful oncological science and practice.

The Workshop and School on Cancer Development and Complexity seeks to convene researchers from various related disciplines to explore multiple facets of the challenges posed by cancer a "disease of the systems." The workshop will provide opportunities for the researchers to exchange new ideas and viewpoints, forge new collaborations and train the next generation of young scientists.

Participants are encouraged to present their work in two sessions and poster presentations that will be held during the workshop.

The program will provide an introduction to both cancer biology and mathematical and statistical methods used in analyzing the datasets currently being produced by several laboratories around the world. Next the program will provide an opportunity to interact with world renowned cancer and bioinformatics researchers and the chance for attendees to present their current work. Finally, all the attendees will receive a certificate of completion of the School.

### Keynote speakers

**Charles Cantor**  
Agena Biosciences, Sequenom, Retrotope and Boston University USA

**Alessandra Carbone**  
Laboratory of Computational and Quantitative Biology, Sorbonne Université, Paris, France

**Isabella Castiglioni**  
Institute of Bioimaging and Molecular Physiology IBFM-CNR, Milan, Italy

**Davide Cittaro**  
San Raffaele Scientific Institute and Hospital, Milan, Italy

**Sui Huang**  
Institute for Systems Biology, Seattle, USA

**Enzo Medico**  
IRCC Candiolo, Turin, Italy

**Bud Mishra**  
Courant Institute of Mathematical Sciences and Tandon School of Engineering, NYU, USA

**Laxmi Parida**  
IBM T.J. Watson Laboratory, Yorktown Heights, NY, USA

**Tamar Schlick**  
Courant Institute of Mathematical Sciences and Dept. of Chemistry, NYU, USA

**Eduardo Sontag**  
Electrical and Computer Engineering & Bioengineering, Northeastern University, USA

**Ioannis Tsamardinos**  
Computer Science Department, University of Crete, Greece

**SCHOOL OF STUDIES  
BICOCCA**

**CISE**  
DIPARTIMENTO DI INFORMATICA, SISTEMISTICA E COMUNICAZIONE

**NYU**

### School Directors

**Marco Antonioti**  
University of Milan-Bicocca, Italy

**Alex Graudenzi**  
IBFM-CNR, Italy

**Bud Mishra**  
Courant Institute, NYU, USA

### Local organization

**Fabrizio Angaroni**  
**Davide Maspero**  
University of Milan-Bicocca, Italy

**Francesco Camporini**  
Fondazione Alessandro Volta

### Registration and Contacts

web: <http://cdac2019.lakecomoschool.org/>  
mail: [marco.antonioti@unimib.it](mailto:marco.antonioti@unimib.it)







# Cancer Development And Complexity 2019

Lake Como School of Advanced Studies, May 27-31, 2019

[Home](#)[Speakers](#)[Program](#)[Accommodation](#)[Registration](#)[Venue](#)[Monday 27th, Special Day Honoring Bud Mishra](#)

## Speakers

- **Charles Cantor**  
Agena Biosciences, Sequenom, Retrotope and Boston University, USA
- **Alessandra Carbone**  
Laboratory of Computational and Quantitative Biology, Sorbonne Université, Paris, France
- **Isabella Castiglioni**  
Institute of Bioimaging and Molecular Physiology of the National Research Council (IBFM-CNR), Milan, Italy
- **Davide Cittaro**  
Ospedale San Raffaele, Milan, Italy
- **Sui Huang**  
Institute for Systems Biology, Seattle, USA
- **Enzo Medico**  
IRCC Candiolo, Turin, Italy
- **Bud Mishra**  
Courant Institute of Mathematical Sciences and Tandon School of Engineering, NYU, USA
- **Laxmi Parida**  
IBM T.J. Watson Laboratory, Yorktown Heights, NY, USA
- **Tamar Schlick**  
Courant Institute of Mathematical Sciences and Dept. of Chemistry, New York University, New York, NY, USA
- **Eduardo Sontag**  
Electrical and Computer Engineering & Bioengineering, Northeastern University, USA
- **Ioannis Tsamardinis**  
Computer Science Department, University of Crete, Greece





# Cancer Development And Complexity 2019

*Lake Como School of Advanced Studies, May 27-31, 2019*

[Home](#)[Speakers](#)[Program](#)[Accommodation](#)[Registration](#)[Venue](#)[Monday 27th, Special Day Honoring Bud Mishra](#)

## Accommodation

Important! For all school speakers and attendees!

We have learned that third part companies are contacting school speakers and attendees offering to make travel arrangements (hotel and flight bookings) on our behalf and asking for credit card details in order to proceed. PLEASE NOTE these agencies are not authorized by us, this is most likely a fraud.

For any doubt do not hesitate to contact us. Thank you!





# Cancer Development And Complexity 2019

Lake Como School of Advanced Studies, May 27-31, 2019

[Home](#)[Speakers](#)[Program](#)[Accommodation](#)[Registration](#)[Venue](#)[Monday 27th, Special Day Honoring Bud Mishra](#)

## Registration

- Registration fees include participation to the school, social events, coffee breaks and school material.
- Registration: 350.00 € until April 30th, 2019.
- Registration: 400.00 € afterward (\*) and on site.
- Daily, on site registration: 100 € (social dinner extra)

(\*) Participants affiliated with the four Universities supporting the Lake Como Schools (Milano Statale, Pavia, Milano Bicocca and Insubria) qualify for a 320.00 € registration fee.

All fees include VAT.

*Registrations are closed.*



## Venue

Lake Como School of Advanced Studies, **Villa del Grumello**, Como, Italy.

Placed in a central position within Europe, close to four international airports, it is hosted in an outstanding old noble palace located on the shoreline of beautiful Lake Como. The School is an international research facility running short term programs on a wide range of interdisciplinary subjects, sharing a common focus on complex systems. The School attracts leading scholars in different fields including: physics, biology, economics, sociology, geopolitics, education, environmental and development studies, to engage in collaborative research. In small teams, visitors explore questions at the cutting edge of science and knowledge. In a context of globalization and in front of the increasing interaction between various kinds of networks, the analysis of complex systems offers insights into economic development, social cohesion and the environment on many geographical scales.



**Venue:** The school will be held at Villa del Grumello, Via per Cernobbio 11, Como (Italy).

**HOW TO GET THERE:** <http://lakecomoschool.org/contact/travel-info/>

Villa del Grumello is 20 min on foot from Como city center – you can also take a bus, lines 6 and 11 (bus stop: "Como Via Regina Piscine Villa Olmo", just after "Villa Olmo").

From the main Train Station (Como S. Giovanni), the nearest bus stop to catch line 6 and 11 is "Piazzale Rocchetto".



[View larger map](#)



## Monday 27th, Special Day Honoring Bud Mishra

Bud Mishra: An “Impure” Mathematician doing (Computer) Science, Biology, and Other Things



On Monday, May 27th, there will be an afternoon dedicated to Bud Mishra, in occasion of (one of) his birthday.

We will start with an aperitif/lunch at 12:30 to continue with informal talks and presentations for the afternoon. Bud Mishra will hold a talk before we will reconvene for dinner at the Restaurant “L’Antica Riva” in Como.

The preliminary program is the following.

Mon May 27	
12:30	<b>Registration Aperitif and Lunch</b>
13:30	Welcome by Marco Antoniotti
13:45	Iuliana Laza
14:15	Charles Cantor
14:45	Carla Piazza
15:00	Pasquale Caianiello
15:15	Alberto Policriti
15:30	<b>Coffee break</b>
16:00	<b>Bud Mishra</b>
19:30	<b>Dinner (Como)</b>

Note that Bud Mishra’s presentation, titled Logic in Time of Cancer will be held in the signature “SpamHaus” format.

Dinner will be at the Restaurant [L’Antica Riva](#).

Join all the revelers in celebrating (one of) Bud’s Birthday!