



# 4th WORKSHOP ON COATED TOOLS & MULTIFUNCTIONAL THIN FILMS 2022

July 20 – 23  
Campinas, Brazil

## Context and Objectives

The workshop is organized by the University of Campinas, UNICAMP, Brazil, the Guangdong University of Technology, China and the University of Nantes, France. The meeting, focusing on coated tools and multifunctional thin films (WPCCT), will be the fourth conference of the series initiated in 2014. The 1<sup>st</sup> edition was held in 2014 at the Guangdong University of Technology (China). Like the previous meetings, for the IV conference edition, renowned experts will be invited covering the field of coatings and advance materials in general for different applications to participate at the UNICAMP's Brazilian university.

This meeting focusses the design and preparation of thin films, hard multi-component and multi-layer coatings, high entropy thin films, optimization of coating for several applications (e.g., tools, tribological, high speed machining), 2-D materials, sensors, high speed machining of coated tools, Data Mining applied to developed advanced materials and virucidal and bactericidal coatings. The workshop aims to improve communications and cooperation among the research institutions, academic organizations, tool industries and other related manufacturing companies in the scope of the conference. The gathering will provide new opportunities for scientists, engineers, students, and enterprises to report news results, share experiences, to continue and discuss new collaborations.

The IV WPCCT Workshop will be held in Campinas, São Paulo, Brazil, on July 20 to July 23, 2022. It will last three days and a half. The agenda contains keynote reports, technical discussions, roundtables, achievement displays and scientist confraternization.



University of Campinas, Brazil

<https://sites.ifi.unicamp.br/wpcct2020/en/>



July 20 – 23 CAMPINAS, BRAZIL



廣東工業大學  
Guangdong University of Technology







Waterfalls of Iguaçu

**Sirius**, the new Brazilian Synchrotron Light Source, will be the largest and most complex scientific infrastructure ever built in the country and one of the first fourth-generation synchrotron light sources of the world. It was planned to put Brazil on the leading position in the production of synchrotron light and is designed to be one of the brightest of all the equipment in its energy class (<https://www.lnls.cnpem.br/sirius-en/>).

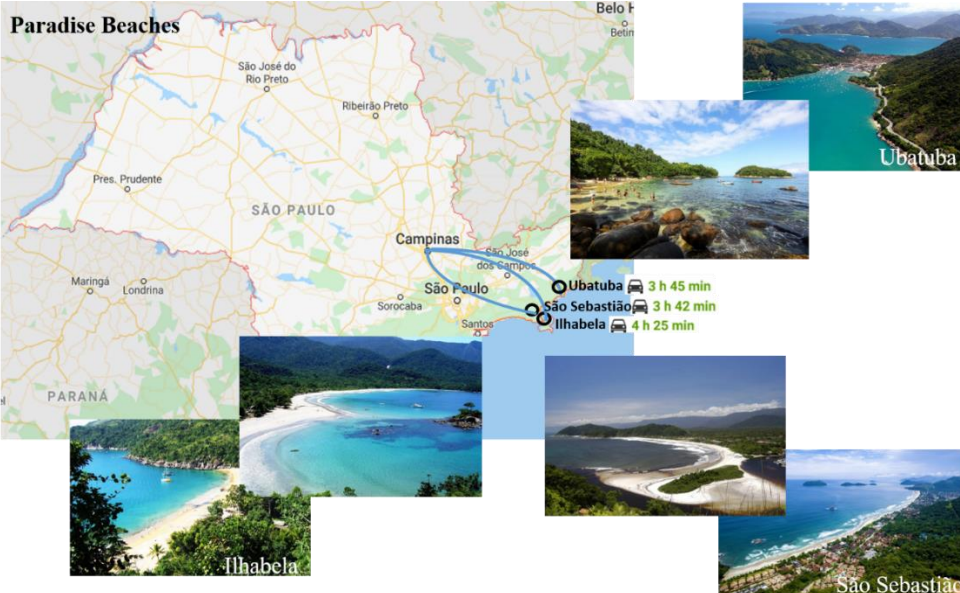
## About University of Campinas (Unicamp)

Founded in 1966, Unicamp is top Brazilian university in number of published articles per faculty member and top Brazilian university in number of patents. 2<sup>th</sup> South America's top 10 universities (QS Ranking) and 9<sup>th</sup> top BRICS universities (<https://www.unicamp.br/unicamp/english>).

## "Gleb Wataghin" Institute of Physics (IFGW)

A world-renowned research institute since its inception, "Gleb Wataghin" Institute of Physics - IFGW is recognized as one of the leading Latin American research centers. IFGW brings together researchers with studies of international impact and is prominent in both basic and applied research. The Institute has played a key role in technological developments in the country, as in the case of optical communications. IFGW staff and alumni, contributing to Campinas becoming a high-tech center, have created many technology companies. IFGW currently has 41 research groups in 4 departments: Quantum Electronics; Applied Physics; Condensed Matter Physics; and Cosmic Rays and Chronology. The research conducted at the Institute distributed over nearly every field in Physics, from Cosmology and Astrophysics to Quantum Physics, from Photonics and Ultrafast Phenomena to Telecommunications, from Biophysics and Biophotonics and Medical Physics to Nanoscience (<https://portal.ifi.unicamp.br/en/>).





## Conference Topics

- Design and preparation of thin films;
- Hard multi- component and multi-layer coatings;
- Multicomponent and high entropy thin films;
- Optimization of coating for several applications (e.g., tools, tribological, high speed machining);
- Coating technology and equipment for cutting tools;
- Evaluation of coated tools;
- 2-D materials and sensors;
- High speed machining of coated tools;
- Data Mining applied to developed advanced materials;
- Virucidal and bactericidal coatings.

## Key dates

Abstract submission deadline: November 30, 2021

Abstract confirmation: December 15, 2021

## Tourist Attractions

- Ubatuba
- Ilhabela
- São Sebastião
- Waterfalls of Iguaçu

## Registration Fees

Regular: 350 USD (before June 15), 400 USD (after June 15)

Student: 150 USD (before June 15), 200 USD (after June 15)

**Registration on website:** <https://sites.ifi.unicamp.br/wpcc2020/en>

The registration fee covers the full access to the conference, the abstract booklet, the conference dinner, the guided tour to the Sirius (the new Brazilian Synchrotron Light Source), and the coffee breaks.

## Organized by

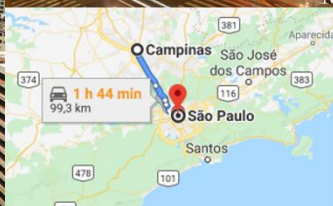
- University of Campinas (Unicamp): “Gleb Wataghin” Institute of Physics (IFGW)
- Guangdong University of Technology (GDUT)
- University of Nantes (UN)

## Partners

- Foundation to Support the Research of the State of São Paulo (FAPESP);
- Support Fund for Teaching Research and Extension (FAEPEX).







## Hotels

- Casa do Professor Visitante (Unicamp). Av. Érico Veríssimo, 1251, Cidade Universitária, Campinas- SP, 13083-851 (~10 min walk from the event);
- Matiz Hotel. Av. Albino J. B. de Oliveira, 1700, Barão Geraldo, Campinas-SP, 13084-551 (~25 min walk from the event).

## Secretary

- Ms. Eliane Valente  
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Address: Sérgio Buarque de Holanda, 777, Cidade Universitária, Campinas-SP, 13083-859.

## Scientific Committee

- Prof. Dr. Chengyong Wang, Guangdong University of Technology, China
- Prof. Dr. Kwang Ho Kim, Pusan National University, South Korea
- Prof. Dr. Ming Chen, Shanghai Jiaotong University, China
- Prof. Dr. Chuazhen Huang, Shangdong University, China
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- Prof. Dr. Ning He, Nanjing University of Aeronautics and Astronautics, China
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- Prof. Dr. Vladimir J. Trava-Airoldi, National Institute for Space Research, Brazil
- Prof. Dr. Fernando Lazaro Freire Junior, PUCRio, Brazil

## Organizing Committee

### Chairs

- Prof. Dr. Fernando Alvarez, University of Campinas, Brazil
- Prof. Dr. Qimin Wang, Guangdong University of Technology, China
- Prof. Dr. Abdou Djouadi, University of Nantes, France

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- Dr. Fernando Graniero Echeverrigaray, IFGW, Campinas, Brazil
- Dr. Mawin Javier Martinez Jimenez, IFGW, Campinas, Brazil
- Saron Rosy Sales de Mello, IFGW, Campinas, Brazil

