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## SECOND SÃO CARLOS SCHOOL ON GLASSES AND GLASS-CERAMICS

Vitreous Materials Lab (LaMaV) at Federal University of São Carlos ([lamav.weebly.com](http://lamav.weebly.com)).



Instructors and attendees of the **First School** (2015) with 70 international students and 30 Brazilians.



Pioneirismo e Excelência  
Nota 7 CAPES



DEMa  
UFSCar

### SCHOOL OBJECTIVES

The CeRTEV team ([www.certeve.ufscar.br](http://www.certeve.ufscar.br)) is organizing the second School on Glasses and Glass-ceramics from April 22 to 27, 2024, following the success of the First International School in 2015.

The main objectives of the school are:

- Provide state-of-the-art information on the structure, dynamic processes (diffusion, viscous flow, relaxation, and crystallization), and optical, electrical, mechanical, and bio chemical properties of glasses and glass-ceramics.
- Disseminate CeRTEV's faculty, infrastructure, and facilities to Brazilian and international Ph.D. students.
- Strengthen the international network of CeRTEV collaborators.
- Attract future students, post-docs, and visiting scientists.

The instructors are well-known experts in experimental, theoretical, and computer simulation studies of glasses.

## LOGISTICS

This intensive six-day program selected 70 M.Sc. and Ph.D. students, post-docs, and guest researchers from 10 countries (China, Germany, India, USA, France, Morocco, Hungary, Slovakia, Turkey, and Brazil) for a stimulating exchange of knowledge and experience in glass science and engineering.

Led by faculty from the prestigious PPGCEM – DEMa program (CAPES level 7: Brazil's top ranking) at the Federal University of São Carlos, the program offers approximately 40 hours of instruction through a dynamic mix of lectures, poster presentations, and interactive discussions. Participants will explore cutting-edge topics, receive valuable feedback on their research, and build lasting connections with colleagues from around the world.

Upon successful completion of a homework assignment, interested participants can earn official course credits. This is not compulsory

FORMULÁRIO DE INSCRIÇÃO: **Aluno Especial 2024-1** - Tópicos Especiais em Cerâmicas: Structure, Dynamics and Properties of Vitreous Materials

<https://forms.gle/fZzBn3TqcmbQKvnr6>

## REGISTRATION

There is no registration fee for the school. We will cover the hotel for six nights and the lunch expenses for the registered students.

**Post-docs, industry researchers, and young professors are welcome to apply for a limited number of guest slots at our intensive school.** However, hotel and meal expenses are not included for guests.

Contact: [dedz@ufscar.br](mailto:dedz@ufscar.br)

**PROGRAM (updated April 2024)**

## PROGRAM (updated April 2024)

| Time                | Monday,<br>22/04/2024                                      | Tuesday,<br>23/04/2024   | Wednesday,<br>24/04/2024  | Thursday,<br>25/04/2024   | Friday,<br>26/04/2024                                       | Saturday,<br>27/04/2024                    |
|---------------------|--|--|---|---|---|--|
| 8:00<br>–<br>9:45   | <b>Welcome</b><br>1.5 min fire talks<br>by the<br>students | Glass structure<br>by Raman<br><b>P. S. Pizani and<br/>Rafaela Bartz</b> | Optical<br>properties<br><b>Andrea de<br/>Camargo</b>   | Machine<br>Learning<br><b>Daniel<br/>Cassar</b>                               | Mechanical<br>properties<br><b>Francisco C.<br/>Serbena</b> | Visit to USP<br>labs at<br>campus 2        |
| 9:45<br>–<br>10:00  | <b>Coffee Break</b>  |  |   |   |   |  |
| 10:00<br>–<br>12:30 | Poster<br>presentations<br><b>Students</b>                 | Glass<br>crystallization<br><b>E. D. Zanotto</b>                         | <b>Sisecam<br/>Innovation<br/>Ilkay Sökmen</b><br>-----<br>Photonic glasses<br><b>Marcelo Nalin</b> | MD<br>simulations<br><b>José P. Rino</b>                                      | Bio properties<br><b>Oscar Peitl</b>                        | Visit to<br>USP's NMR<br>and glass<br>labs |
| 12:30<br>–<br>14:00 | <b>Lunch Break</b>   |  |   |   |   |  |
| 14:00<br>–<br>15:45 | Glass structure<br>by EPR<br><b>Hellmut Eckert</b>         | Glass sintering<br><b>Ralf Müller</b>                                    | <b>Free for<br/>shopping or<br/>guided tour</b>   | Ab-initio<br>simulations<br><b>G. Dalpian</b>                                 | Electrical<br>properties<br><b>Ana Rodrigues</b>            | Return to<br>São Paulo                     |
| 15:45<br>–<br>16:00 | <b>Coffee Break</b>  |  |   |   |   |  |
| 16:00<br>–<br>18:00 | Glass structure<br>by NMR<br><b>Marcos Oliveira</b>        | Glass-ceramics<br><b>Eduardo B.<br/>Ferreira</b>                         | <b>Free for<br/>shopping or<br/>guided tour</b>   | <b>Corning<br/>innovation<br/>Claudio<br/>Mazzali &amp;<br/>Jeffrey Kohli</b> | Visit to UFSCar's<br>glass labs                             |  |
|                     | <b>Welcome<br/>reception at<br/>ParqTec</b>                | <b>Cultural<br/>exchange /<br/>international<br/>delicacies</b>          | <b>Free</b>   | <b>Free</b>   | <b>Farewell Dinner<br/>at Cozinha do<br/>Lobo - UFSCar</b>  |  |

\*\* = online talks

### SPONSORS

Fapesp - CeRTEV (UFSCar, USP, UNESP), DEMa/UFSCar, ParqTec, ICG, FunGlass Institute, Sisecam, Corning, and AGC.

### INSTRUCTORS

Ana Candida M. **Rodrigues** – Electrical properties  
 Andréa S. S. **de Camargo** - Optical Properties  
 Claudio **Mazzali** – Introduction to Corning S&T  
 Edgar Dutra **Zanotto** – Nucleation and crystallization  
 Eduardo **Bellini Ferreira** – Glass-ceramics  
 Daniel R. **Cassar** – Machine learning  
 Gustavo **Dalpian** - Ab-initiation simulations

Hellmut **Eckert** – EPR

İlkay **Sökmen** – Sisecam innovation

Jeffrey **Kohli** – Corning collaboration with academia

José Pedro **Rino** – MD simulations

Marcos de **Oliveira Junior** - NMR

Francisco **Serbena** – Mechanical properties

Marcelo **Nalin** – Photonic glasses

Paulo S. Pizani and Rafaela Barts – Raman spectroscopy

Ralf **Müller** – Glass sintering

Oscar **Peitl** – Bioactive glasses

## **DATE and VENUE**

**April 22–27, 2024**

**São Carlos**, São Paulo State, Brazil

The city is known as Brazil's capital of science and technology, with approximately 2,500 Ph.D. and 250,000 inhabitants; one Ph.D. for every 100 residents. The public universities (USP and UFSCar) and the Embrapa Research Center in São Carlos are among Brazil's best. The city also boasts over 100 high-tech companies, mainly in informatics, materials, optics, biotech, and chemistry. Finally, the weather is excellent with over 320 sunny days per year and many rivers, waterfalls, and natural forest areas around the city.