CONSOLFOOD2025

Sixth International Conference: Advances in Solar Thermal Food Processing

We invite you to join us at CONSOLFOOD2025.

Many people in developing countries still burn wood, charcoal, or even garbage on open fires for cooking purposes because they do not have access to electricity or gas. The inefficient burning of wood, charcoal, dung, and plant residues causes health problems, deforestation and greenhouse gas emissions. The potential of thermal solar energy for food processing tasks like drying, cooking, and pasteurization is well understood, but adoption of this technology is not increasing as rapidly as would be desirable. In the sunny parts of the developed world, few people would recognise a solar cooker, and most still use only gas and electricity for cooking. The introduction of solar cookers in sunny areas for cooking, food drying, and water sterilization is our goal.

CONSOLFOOD 2025 will take place at **Marseille (Aix Marseille University and Le Présage solar restaurant, France)**.

CONSOLFOOD2025 parallel events may be organized in other parts of the world so that interested groups of people can watch the presentations in real time, and organise their own local related activities.

Once again, we will focus on advances in solar cooking, solar drying and other related solar food processing topics. As usual, we have attracted experts from all over the world to present and discuss the latest developments. Please take a look at the presentations on the latest provisional version of our planned programme.

An exhibition of solar cookers will be available for viewing throughout the conference. We plan to produce our lunches at the solar restaurant with the help of our friend, the sun.

Fee: We are planning to run the conference in **hybrid format** with a fee of 200 euros before 1st April 2025 and 300 euros after 1st April 2025. Interested people should contact via email the chairman (cruivo@ualg.pt)

For updated information on CONSOLFOOD2025 go to www.consolfood.org

5-6-7 May 2025

MARSEILLE-FRANCE

Sixth International Conference

CONSOLFOOD2025

>Advances in Solar

>Thermal Food Processing

Institutional Support

Tentative programme:

5th May 2025
10:00 – 12:30
Installing the solar cookers in the exhibition area for real solar cooking
14:20 - 14:40 Opening session
14:45 - 16:25 Presentations and Q/A- session 1A
16:25 - 16:40 Short break
16:40 - 18:30 Presentations and Q/A- session 1B
6th May 2025
09:00 - 10:15 Presentations and Q/A- session 2A
10:15 - 12:30 Exhibition and use of solar cookers
13:00 - 14:00 Solar lunch
14:45 - 16:25 Presentations and Q/A- session 2B
16:25 – 16:40 Short break
16:40 - 18:20 Presentations and Q/A- session 2C

7th May 2025
09:00 - 10:15 Presentations and Q/A- session 3A
10:15 - 12:30 Exhibition and use of solar cookers
13:00 - 14:00 Solar lunch
14:45 - 16:25 Presentations and Q/A- session 3B
16:25 - 16:40 Short break
16:40 - 18:25 Presentations and Q/A- session 3C
18:30 - 19:00 Closing session

Note :Times mentioned above are for Marseille-France
(CEST — Central European Summer Time)

Organizing Committee:

Celestino Ruivo, (Chairman)
Institute of Engineering, University of Algarve, Portugal
Association for the Development of Industrial Aerodynamics, Portugal
Email: cruivo@ualg.pt

Thomas Fasquelle, (Local Chairman)
Aix Marseille University, Marseille, France

Benjamin Kadoch,
Aix Marseille University, Marseille, France

Séverine Barbosa,
Aix Marseille University, Marseille, France

Benjamin Leroy
Le Présage (société CANOPÉE Le Présage), Marseille, France

Pierre-André Aubert
Le Présage (société CANOPÉE Le Présage), Marseille, France

Scientific Committee:

Detailed tentative programme of the sessions at conference room Day 1- 5th May 2025

Day 1 (14h20 14h40)				
Opening session		Celestino Ruivo, Pierre-André Aubert, Benjamin Kadoch, Director of Polytech Marseille, etc (tentative names, in preparation)		
Duration	No. Abs.	Title	Authors	Country
Day 1 Session 1A (14h45 16h15)				
40 min	26 (invited)	Solar drying of local fruits and vegetables	M. Zahira Meebed	Egypt
10 min	6	Application of thermosolar technologies for the sustainable production of safe and wholesome fishmeal from tilapia residues	S. Herrera-Aguayo, B. Castillo-Téllez, M. Castillo-Téllez, J. González-Pérez, J.Percino-Picazo, M. Martín del Campo-Solís	Mexico
10 min	34	Comparison of antioxidant activity of dehydrated apple by three drying techniques	R. Quiroz Martínez, J. C. Gutiérrez Villegas, B. Castillo Téllez, G. Guzmán Castañeda	Mexico
10 min	41	Multifunctional hybrid solar dehydrator design within the framework of a frugal innovation process	A. Andújar Zamar, X.A. Pose Rodriguez, A. López-Agüera	Spain
10 min	46	Harnessing solar drying for starter cultures: a novel approach to backslopping fermentation	M. Houngbédji, D. Bangbadé, D.S. Dabadé, , S.D. Agossevi, B.P. Agbobatinkpo, S.W. Padonou, J. Dossou, P. Azokpota, D.J. Hounhouigan	Benin
10 min	25	Implementation of a solar concentrator for the dehydration of fruits	M. Colunga Saucedo, F. Santos Garcia, Y. Nahmad Molinari	Mexico
Day 1 Session 1A Q/A (16h15 16h35)				
Day 1 Session 1B (16h50 18h10)				
30 min	2	Solar box cookers: a comprehensive analysis of the impact of design components	Kurt Neubek	USA
10 min	5	Experimental performance characterization of a 30-60° box solar oven	X. Apaolaza Pagoaga, A. Carrillo Andrés, C. Rodrigues Ruivo	Spain/Portugal
10 min	11	Developing parabolic trough solar cooker "Sun Arc Oven"	David Henri	USA
10 min	15	Study of a house-integrated cylindrical solar cooker	S. Mahavar, S. Kumar, A. Saini, D. Kumari	India
10 min	39	Using carbon credits to make solar cooking in refugee camps profitable	R. Haines	USA
10 min	22	Box type solar cooker components role in improving performance for society acceptance	K. A. Sarma	India
Day 1 Session 1B Q/A (18h10 18h30)				

Detailed tentative programme of the sessions at conference room Day 2- 6th May 2025

Day 2 Session at Le Prèsage or at conference room * (9h00 10h00) (*)- Exact location to be confirmed				
30 min	Invited	Technical details and their evolution over time behind the Scheffler reflectors	Wolfgang Scheffler	Germany
30 min	Invited	Solar cooking at Le Présage, a quest for a delicious future	Pierre-André Aubert	France
Day 2 Session 2A Q/A (10h00 10h15)				
Day 2 Session 2B (14h45 16h05)				
30 min	invited	Father Himalaya and the quest for high temperatures by solar means	Jean-Jacques Serra	France
10 min	14	Albera, a new solar concentrator with constant-height focus	R. Le Gall, D. Taquet, J.-M. Ronflard, , J.-J. Serra	France
10 min	27	Problems and solutions in the development of solar cookers with storage for indoor cooking	J. C. Sattler, K. Kassmi, M. Hmich, B. Zoukarh, K. Schwarzer, S. Bouaichaoui, C. Adnen, A. C. Moniz Tavares, T. Ribeiro Eusébio, K. Effenberg, P. Schmitz, C. Teixeira Boura, U. Herrmann	Germany/Morocco/Algeria/Tunisia/Portugal
10 min	28	Performance analysis and dynamic modeling of a hybrid solar cooker for sustainable cooking in remote	A. Moniz Tavares, T. Eusébio, J. C. Sattler, P. Schmitz, K. Schwarzer, K. Kassmi, M. Hmich, B. Zourarh, A. Cavaco, R. El Cadi	Portugal/Germany/Morocco
10 min	29	Preliminary comparison of Scheffler concentrators for solar cooking	B. Sanglard, X. Apaolaza-Pagoaga, A. Carrillo-Andrés, T. Fasquelle, S. Barbosa, B. Kadoch	France/Spain
10 min	30	Optimization of the secondary reflector for solar cooking in a restaurant using a Scheffler concentrator	B. Sanglard, T. Fasquelle, S. Barbosa, B. Kadoch	France
10 min	47	Design construction of a high-temperature, single reflection solar furnace	L. Dando,S. Eibner	France
Day 2 Session 2B Q/A (16h15 16h35)				
Day 2 Session 2C (16h50 18h10)				
10 min	32	Experimental assessment of thermal energy storage using sunflower oil in Kenya	P. Bala, M. Vanierschot, T. Compernolle	Kenya/Belgium
10 min	3	Prototyping a solar canteen for the schoolyard	I. Lucas, C. Meseguer, M. Candela	Austria/Spain
10 min	9	Solar cooker performance: cooking times with varying sunshine levels and meteorological conditions	K. Gupta	India
10 min	13	Sustainable cooking technologies: assessing nutritional quality and environmental impact of solar ovens vs. traditional methods	J. Caputo, A. M. Barreiros, J. Garcia	Portugal
10 min	16	History of Sam Erwin and the Solar Chef and	Janie McNutt	USA
10 min	42	How solar cooking and its outreach contributes to health in work and educational environments in vocational education	S. Perandones Marrero	Spain
10 min	23	Clean cooking in Bolivia: technologies, access, and socioeconomic context	M. Beltran-Siñani, A. Carrillo-Andrés, X. Apaolaza-Pagoaga	Germany/Spain
10 min	7	Continuity: 15 years of Tamera's solar kitchen	D. Baillie,H. Larndorfer, B. Kovats	Portugal
Day 2 Session 2C Q/A (18h10 18h30)				

Detailed tentative programme of the sessions at conference room Day 3- 7th May 2025

Day 3 Session 3A at Le Prèsage or at conference room * (9h00 10h00) (*)- Exact location to be confirmed				
30 min	invited	Solar cookers: recognition and diffusion/adequate instructions?/psychopathologies	D. Oxford, S. Maclachlan	UK
30 min	18 (invited)	Necessary but not sufficient: considering current and yet untried means of cooker distribution and promoting adoption	L. Krueger	USA
Day 3 Session 3A Q/A (10h00 10h15)				
Day 3 Session 3B (14h45 16h05)				
10 min	4	Holistic and collaborative solutions for scaling solar cooking impact	Sara Rosen, Caitlyn Hughes	USA
10 min	8	To what extent can solar ovens be used by french bakeries?	G. Guillet	France
10 min	37	Update and improvement of the Italian wikipiedia webpage of "solar cooker"	G. Coccia, G. Tomassetti, G. Di Nicola, A. Varesano, N. Ulivieri, A. Famiglietti	Italy
10 min	20	We need more good pictures of solar cookers in the public domain	L. Krueger, D. Oxford	USA/UK
10 min	40	Design optimization of a foldable and portable solar cooker for humanitarian and refugee camp	S. Tomassetti, C. Paciarotti, M. Muccioli, T. N. Demissie, G. Coccia, G. Di Nicola	Italy
10 min	31	Solar cooking for people engagement in sustainable transition: an example in Southern Italy	A. Famiglietti, M.Famiglietti, A. Cefalo, F.Giusto, M. Di Fronzo, S. Di Pasquale, C. Santoro	Italy
10 min	36	Modular design of a single axis Solar Tracker	S.T. Segaran	UK
10 min	17	Shape of parabola influences cooking and safety. Materials used in solar cookers have environmental and health impact	A. Bivas	France
Day 3 Session 3B Q/A (16h05 16h25)				
Day 3 Session 3C (16h40 17h50)				
15 min	invited	A modern cooking solution for an African staple food - Processing of Cassava into Gari, with Solar Energy	H. Hoedt	Germany
15 min	invited	SophiA - solar off-grid solutions for pharmacies and hospitals in Africa	H. Hoedt	Germany
10 min	10	Bi-energy oven prototype	G. Pourcelot	France
10 min	19	Solar cooking to stop deforestation and generate employement in Burundi	J. Bello, E. Castrillo, C. Hernández, D. Nimubona, J. de la Cruz, J.I. Martínez, M.Fernández, P. Flórez, X. Rivas, VM. Varela, M Iglesias, JL Souto	Spain
10 min	33	Funnel solar cookers model FB	J. Bello, R. Bello	Spain
10 min	24	Hybrid solar water purification system: integrating solar concentration and photovoltaic energy for clean water production	L.E. García Sánchez, D. I. García Camacho	Mexico
Day 3 Session 3C Q/A (17h50 18h10)				
Day 3 (18h20 18h45)				
Closing session		Celestino Ruivo, Dave Oxford, Kartikey Gupta, etc (tentative names, in preparation)		