

Third International Conference **CONSOLFOOD2020**

Advances in Solar Thermal Food Processing

22-23-24 January 2020

INSTITUTE OF ENGINEERING; UNIVERSITY OF ALGARVE; CAMPUS DA PENHA; FARO-PORTUGAL

Fighting the climate crisis through education: Using Solar cooking principles to teach bioclimatic design and other ecological topics.



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Energy consumption in the building sector is an important factor of climate change. Part of the cause are the heating and air conditioning systems using non-renewable energy sources.



LOCATION

A Coruña. Spain

43.37° N, -8.37° O



Bioclimatic experimental module “A Vieira”

CIFP Someso. A Coruña



Bioclimatic experimental module “A Vieira” CIFP Someso. A Coruña



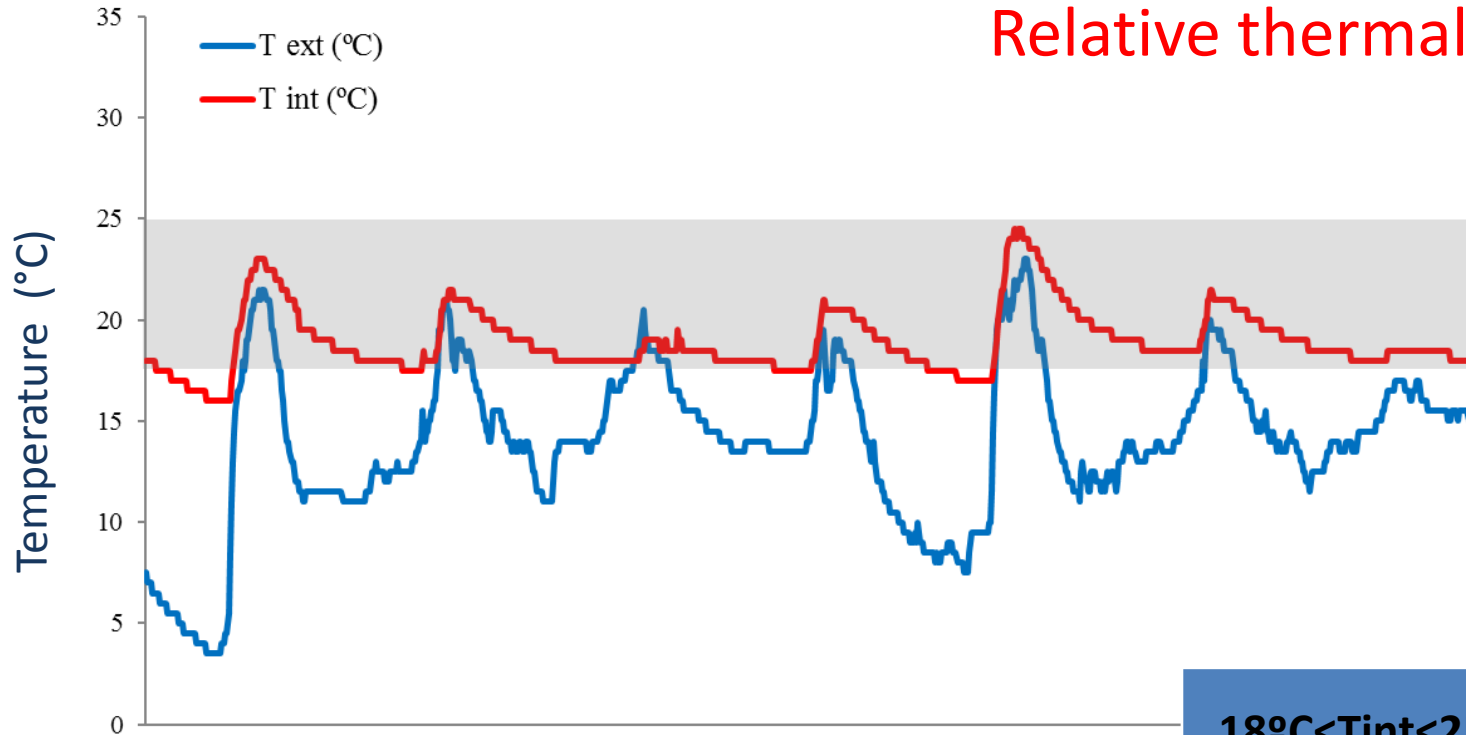
Summer



Winter

RESULTS

Relative thermal comfort



December 2015

In collaboration with:
Sustainable Energetic Applications Group
Faculty of Physics USC. Santiago de Compostela. Spain)

$18^{\circ}\text{C} < T_{\text{int}} < 25^{\circ}\text{C}$

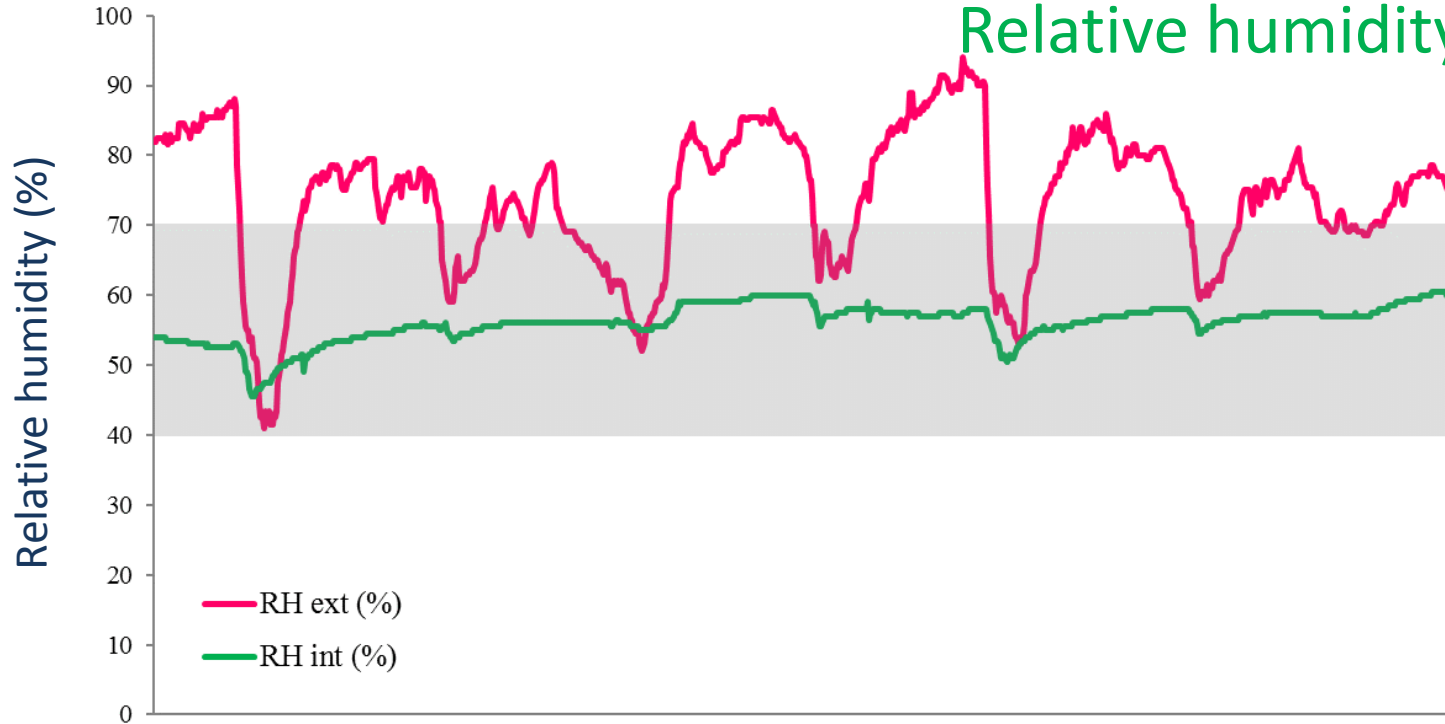
85%

$18^{\circ}\text{C} < T_{\text{ext}} < 25^{\circ}\text{C}$

16%

RESULTS

Relative humidity comfort



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Faculty of Physics USC. Santiago de Compostela. Spain)

December 2015

Interior

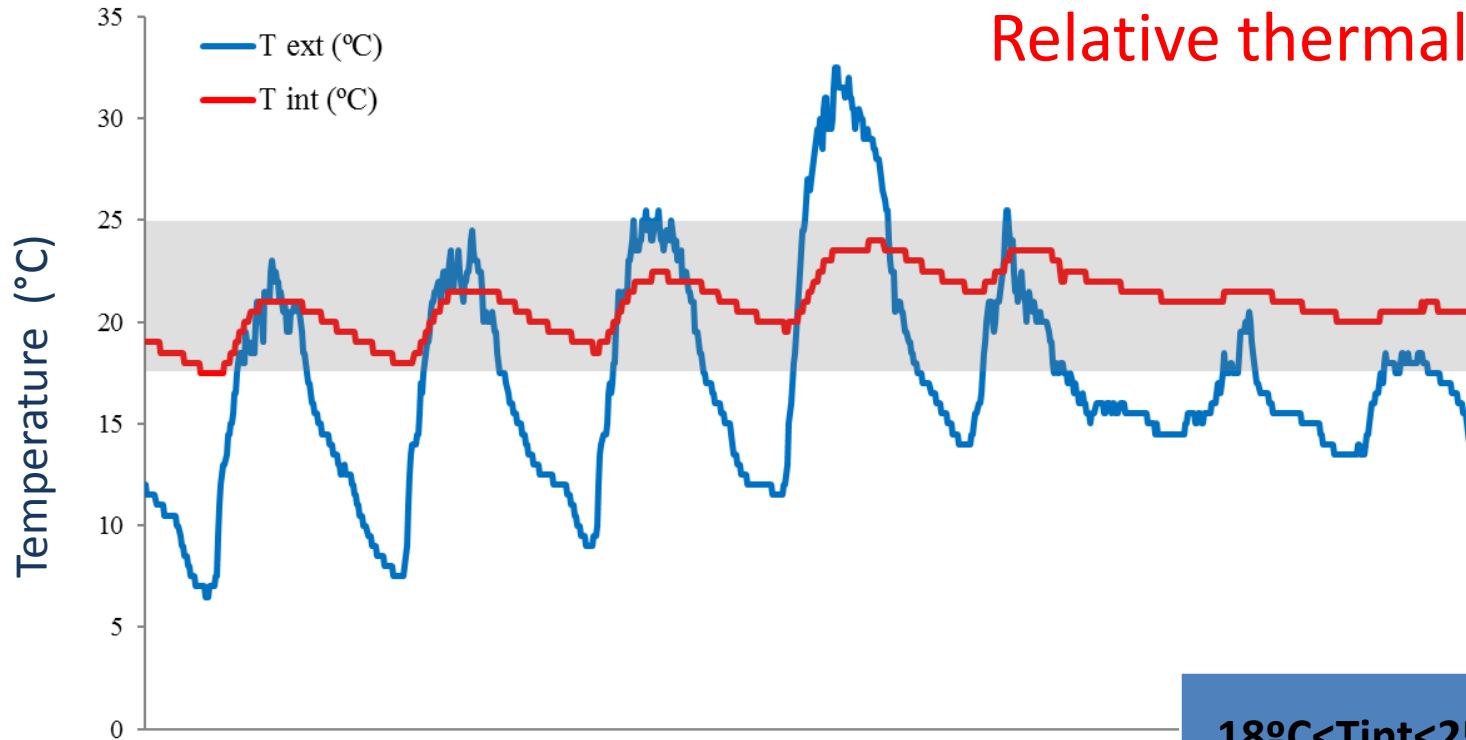
100%

Exterior

31%

RESULTS

Relative thermal comfort



In collaboration with:
Sustainable Energetic Applications Group
Faculty of Physics USC. Santiago de Compostela. Spain)

May 2016

$18^{\circ}\text{C} < T_{\text{int}} < 25^{\circ}\text{C}$

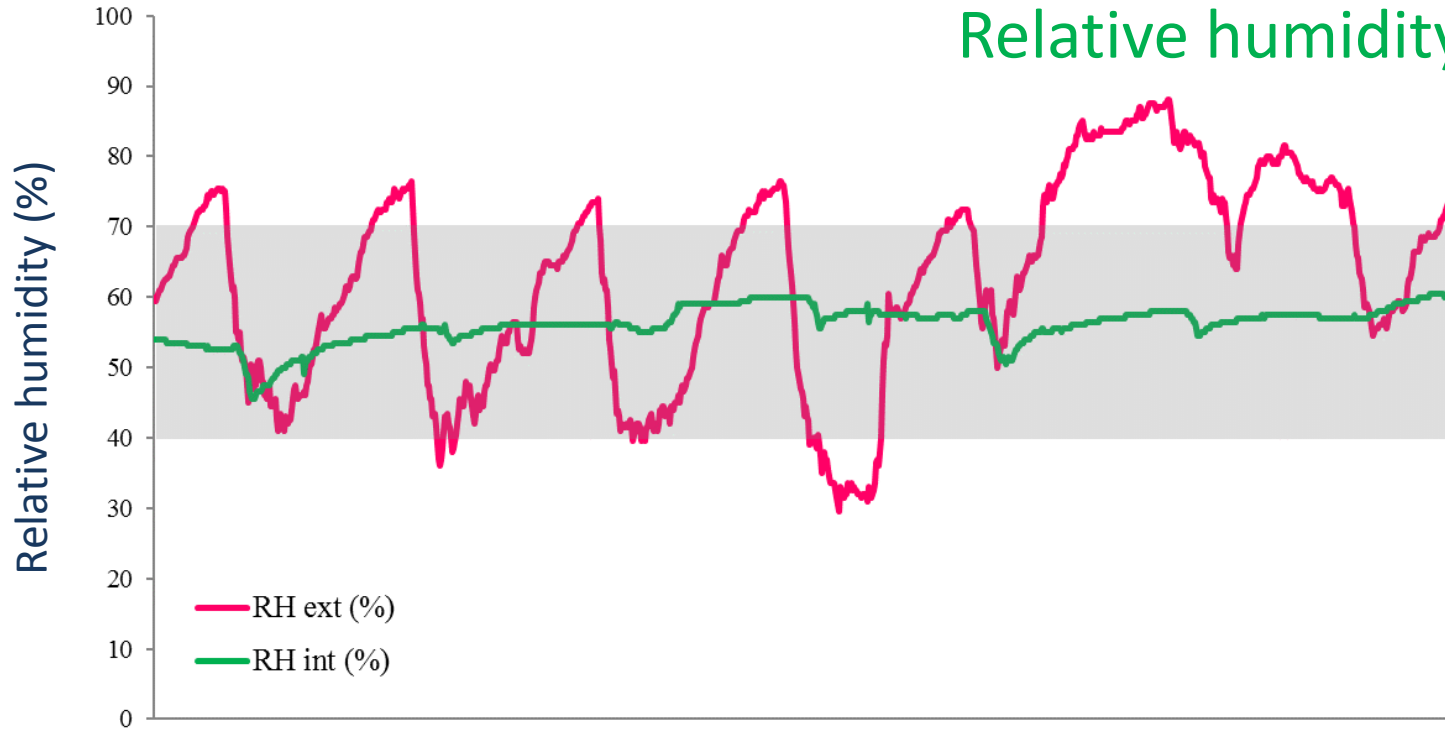
98%

$18^{\circ}\text{C} < T_{\text{ext}} < 25^{\circ}\text{C}$

31%

RESULTS

Relative humidity comfort



In collaboration with:
Sustainable Energetic Applications Group
Faculty of Physics USC. Santiago de Compostela. Spain)

May 2016

Interior

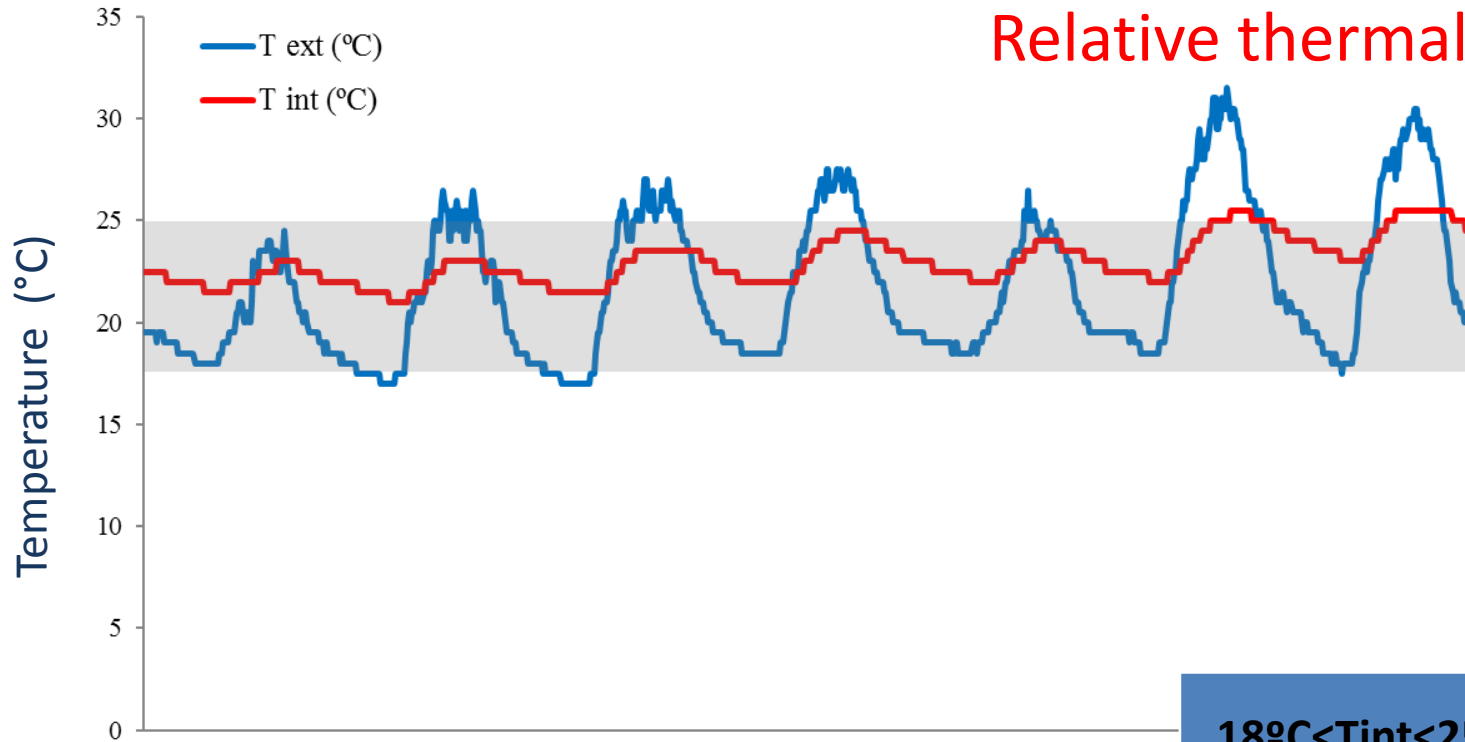
100%

Exterior

63%

RESULTS

Relative thermal comfort



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July 2016

$18^{\circ}\text{C} < T_{\text{int}} < 25^{\circ}\text{C}$

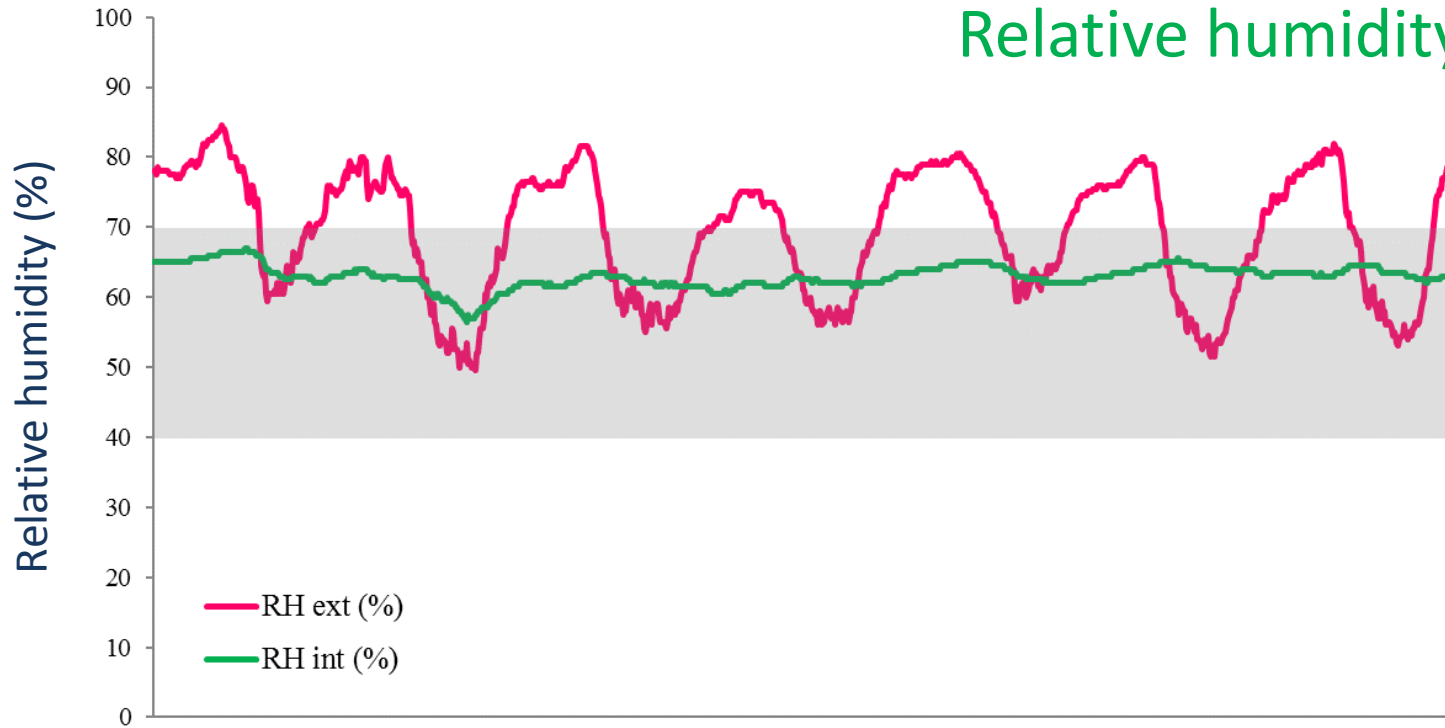
94%

$18^{\circ}\text{C} < T_{\text{ext}} < 25^{\circ}\text{C}$

73%

RESULTS

Relative humidity comfort



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Faculty of Physics USC. Santiago de Compostela. Spain)

July 2016

Interior	100%
Exterior	74%



“Casa vs Caja”

HOUSE vs BOX

**Different dimensions but
similar concepts:**

four walls

a floor

a window

(through which the sun enters)



**Low cost
solar oven**

REWARD:
Delicious dishes



Example for building

Grape vine

Several applications:

Sun in winter

Shadow in summer

Grapes in autumn



**Single use bottles:
not a good solution**

Don't buy them

Recover them!!!

Save the oceans

Save the climate



New uses, long life:

Use as stabilizers

For heating water

Hot water to wash up

For padding during transport

Fighting the climate crisis through education:
Using Solar cooking principles to teach bioclimatic design and
other ecological topics

**“Nobody made a greater mistake
than he who did nothing
because he could do only a little”**

E. Burke



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