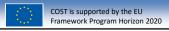


Building Integration of Solar Thermal Systems – TU1205 – BISTS

Meeting of the Management Committee & Working Groups of COST Action TU1205 4-5 April 2016-Barcelona

"Building Integration of Solar Thermal Systems (BISTS)"

Soteris Kalogirou Action Chair





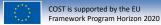


European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

Management Committee meeting

- Welcome to participants
- Adoption of agenda
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Building Integration of Solar Thermal Systems - TU1205 - BISTS

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European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

Welcome to participants

- · Warm welcome to all.
- All invited but only MC Members have voting right.
- COST is based on willingness to contribute (this is very important especially at this stage....).
- · No research is funded but networking activities.
- · SAFETY issues.
- · Welcome from Daniel, University of Lleida.
- Presentation of new delegations/partners-after adoption of agenda and approval of previous meeting minutes.
- Unfortunately we had one very sad event.....







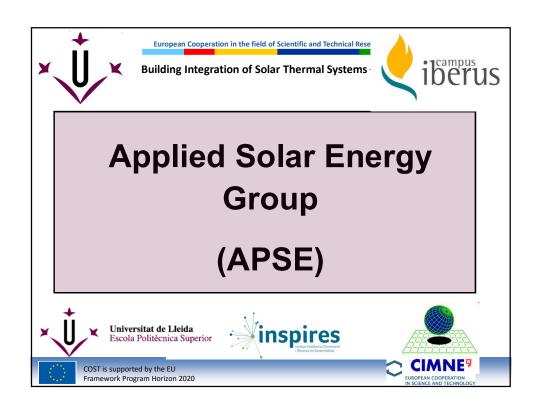
Building Integration of Solar Thermal Systems – TU1205 – BISTS

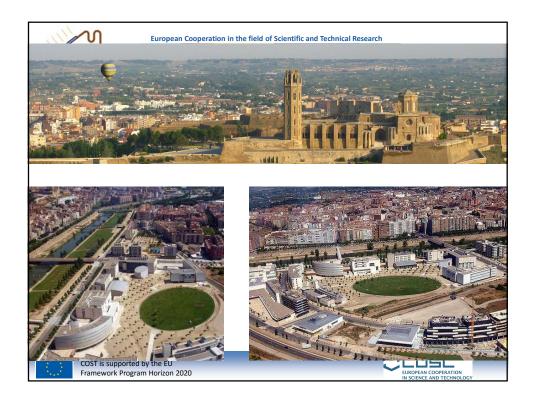
Professor Milorad Bojic

- After long illness, our respected colleague and friend, professor at the Faculty of Engineering, Kragujevac, passed away on 22 January 2016.
- This is a big loss for the academic and engineering communities and for our Action.









RESEARCH LINES

Solar Generation Systems

Development of photovoltaic, thermal and hybrid innovative systems

Numerical simulation of thermal collectors (CFD) and photovoltaic collectors (SPICE)

Experimental characterization of thermal and photovoltaic systems

Building integration of solar thermal and photovoltaic collectors

Photovoltaic green-roofs

Solar Concentration

Development of optical elements to increase the conversion efficiency

Development of optical systems to facilitate the building integration of solar systems

Framework Program Horizon 2020

Energy Efficiency

Analysis and building energy refurbishment

Energy optimization and parametric analysis based on statistical algorithms

Development and application of stochastic inverse models for optimizing solar hybrid systems

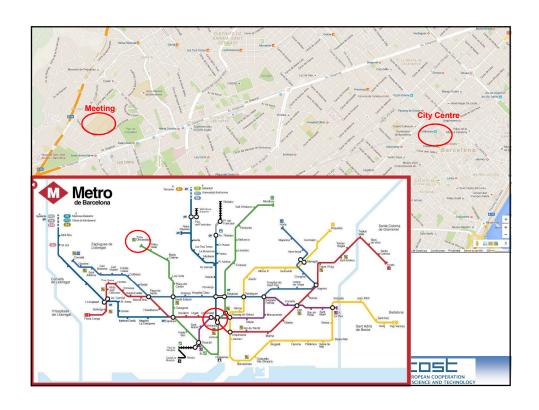
Service models for energy savings in buildings based on ICTs and low cost measures

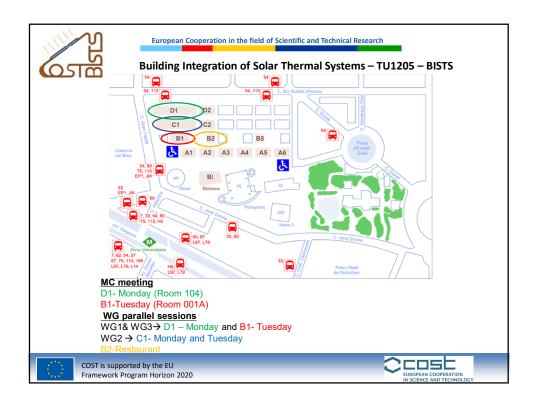


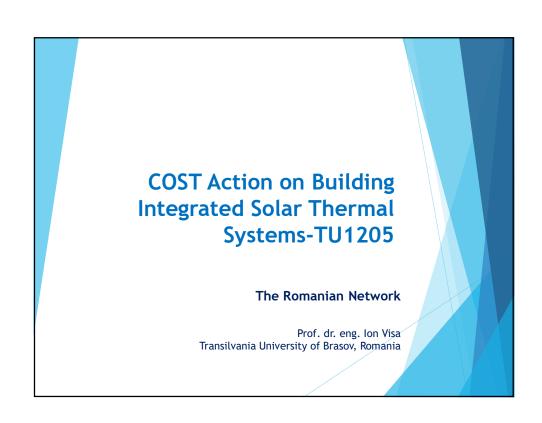


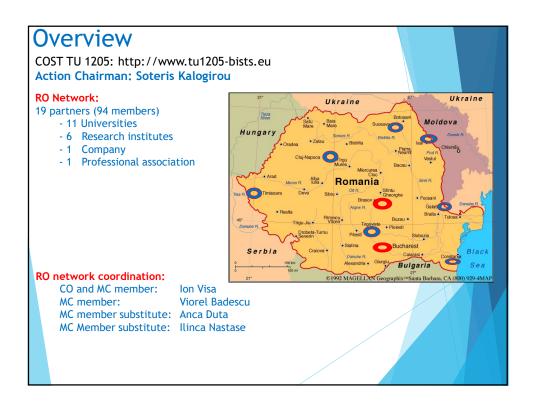












No.	Partner institution	No. of	Heat	Solar	ST	ST	Built
		members	transfer	radiation	materials	technology	environmer
1	Transilvania University of Brasov	13					
2	Politehnica University Bucharest	10					
3	Technical University of Civil Engineering, Bucharest	15					
4	Politehnica University of Tmisoara, Fac. Civil Engineering	5					
5	Hofigal Export Import SA Bucharest	1					
6	ICPE CA, Bucharest	2					
7	INCD IMNR, Bucharest	3					
8	Institute for Physical Chemistry, (ICF) Ilie Murgulescu, Bucharest – Synthesis	10					
9	ICF – Characterisation	10					
10	Professional association for solar energy SUNe	1					
11	Valahia University of Targoviste	1					
12	University for Architecture and Urbanism "Ion Mincu", Bucharest	3					
13	INCD for Airspace « Elie Carafoli «	4					
14	INCD Turbomotors COMOTI	1					
15	Tehnical University of Cluj Napoca	9					
16	Tehnical University Gh. Asachi, Iasi	2					
17	University of Low Danube, Galati	2					
18	Maritime University Constanta	1					
19	University Stefan cel Mare, Suceava	1					

RO-Network: Activities

2015

June 2015:

Network meeting during WREC (Bucharest)

- BIST Presentation (Prof. Kalogirou)
- RO-Network Action Plan (Prof. Visa)

September 2015:

BIST RO-Network Workshop in the EENVIRO Conference (Bucharest)

2016

April 2016:

RO-Network presentation in the COST meeting

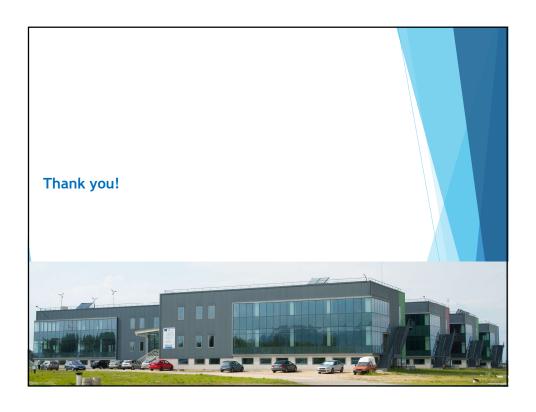
September 2016:

BIST RO-Network Workshop, Bucharest

September 2016:

Challenging energy issues in transition economies; the case study of Romania Special issue of the Journal of Energy Engineering (ASCE)







Building Integration of Solar Thermal Systems – TU1205 – BISTS

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Building Integration of Solar Thermal Systems - TU1205 - BISTS

Report from the COST Office

- New version of e-COST system
 - Now full electronic OTRR forms are used.
 - Submit everything electronically to the system no paper copies are accepted any more.
 - It didn't work well last time apologies no need to send 20 reminders each (one every now and then is fine).
 - Need to sign the presence form as before.
- Need to be careful to upload all documents properly
- No chance is given to carry out corrections.
- Scientific officer Dr. Michael Pero invited but couldn't participate.

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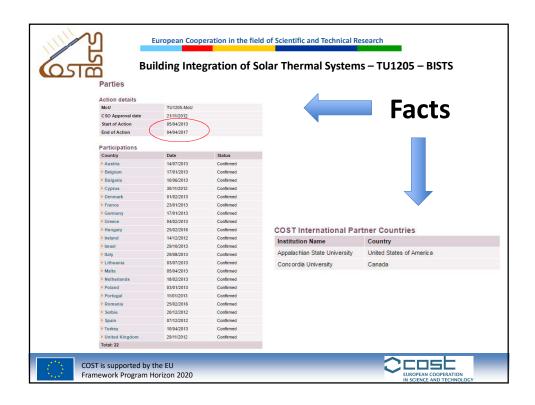
European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

Status of the Action

- Status of Action, including participating countries:
 - 22 COST countries participating (next slide)
 - 32 MC members (+14 substitute members)
 - Including 3 new MC members (I from Hungary and 2 from Romania)
- Non-COST countries:
 - Two non-COST countries participating:
 - USA (James Russell-Appalachian State University)
 - Canada (Andreas Athienites-Concordia University) → Presentation from Costas Kapsis in the afternoon.



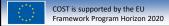




Building Integration of Solar Thermal Systems – TU1205 – BISTS

Budget status, budget planning and allocation process

- Third year budget 122,000 Eur.
- Main expenses:
 - Total for meetings 77,400 Eur.
 - Training schools = 20, 300 Eur
 - 4 STSM planned = 6,000 Eur. (unfortunately none carried out)
 - Dissemination 1,850 Eur. (1500 webpage + 350 proceedings)
 - Other = 2000 Eur. (Bank charges)







Building Integration of Solar Thermal Systems - TU1205 - BISTS

Meetings

- YEAR 3
- MC & WG First meeting Guimaraes (July 2015)
 - Combined with Action Symposium
- MC & WG Second meeting Barcelona (April 2016)
 - Combined with training school







European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

New Budget reduction

- The COST Association has allocated a budget of 101,750 EUR for COST Action TU1205 for Grant Period 4 (2016-05-01 to 2017-04-04)
- New overall reduction of about 15% to all Actions.
- More later....





Building Integration of Solar Thermal Systems – TU1205 – BISTS

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Building Integration of Solar Thermal Systems – TU1205 – BISTS

Critical managerial issues

- Pay more attention to emails received concerning deadlines (very important).
- Emphasis on managerial issues concerning payments.
 - Make a note and when we are late in paying send an email (maybe something goes wrong) → 1-2 emails only please....
- · Reimbursement procedure
 - All payments will be carried out simultaneously, so the sooner will complete the missing items the sooner all participants will get paid.
 - Submit all material once you go back as we need to process OTTR forms before 25/4 (Good Monday).







Building Integration of Solar Thermal Systems - TU1205 - BISTS

Procedures:

- Proof of participation is the attendance list.
- → Make sure you sign this list both days.
- Reimbursement claims are now send electronically through e-cost system.
- Mr. Charalambos Tsioutis and myself can answer questions concerning details.

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Building Integration of Solar Thermal Systems – TU1205 – BISTS

Always remember

- Communicate to me any projects submitted/organised based on the Action, like:
 - New PhDs (one recently receive by Istvan)
 - New local funded research
 - New H2020 proposals, etc.
 - → Very important for the progress of the Action
 - → I need to know this even if the proposal was not successful.







Building Integration of Solar Thermal Systems – TU1205 – BISTS

Critical items:

- We are at the end of Year 3 and we have a lot of items to prepare/deliver....
- Need commitment from everybody to deliver things on time.
- Please try to keep promises made and timetables agreed.... A lot of them will be agreed on this meeting.
- We all need to complete the Action successfully.







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Building Integration of Solar Thermal Systems - TU1205 - BISTS

According to MoU:

- WG1. Development and characterisation of new BISTS
- Task 1.1 Review of the state of the art V DONE
- Task 1.2 Development of new BISTS solutions (Year 3 & 4)
- Task 1.3 Characterisation of BISTS developed in Task 1.2 (Y 3 & 4)
- D.1.1. Review of current STS and identification of problems associate with their building integration. This review will also be submitted as a joint partner publication in a peer reviewed journal (Month 12) V DONE
- D.1.2. Annual STSM on BISTS development and characterisation for PhD students and Early Stage Researchers (Month 6, 18, 30, 42) ON-GOING
- D.1.3. Annual Training School for dissemination of expertise on BISTS development and characterisation techniques and new architectural solutions to PhD students and Early stage researchers (Month 18, 30, 42) ON-GOING
- D 1.4. Report on the evaluation technologies available for BISTS characterisation (Month 24) JUST FINISHED.



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European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

WG2. Modelling and Simulation

- Task 2.1 Development of new mathematical and numerical models for BISTS (Years 3 & 4)
- Task 2.2 Validation and implementation of codes developed in 2.1
- D 2.1. Review of current STS modelling techniques. This review will also be submitted as a joint partner publication in a peer reviewed journal (Month 12) ▼ DONE
- D.2.2. Annual STSM for PhD students and Early Stage Researchers on theoretical modelling and numerical simulation of thermal behaviour of BISTS (Month 6, 18, 30, 42)
- D.2.3. Annual Training School for dissemination of expertise to PhD students and Early Stage Researchers (Month 18, 30, 42) ON-GOING
- D 2.4. Report on the validation of developed codes, both thermal and optical (Month 30?)
- D 2.5. Report on the new models developed during the project and potential for adaptation for RES (Month 42).
- D.2.6. Report on the development of new models for innovative integrated STS applications (Month 46)







Building Integration of Solar Thermal Systems - TU1205 - BISTS

WG3 Investigation of new applications for innovative BISTS

- Task 3.1 Design of innovative BISTS designs
- Task 3.2 Fabrication of BISTS prototypes
- Task 3.3 Characterisation of novel BISTS indoors and outdoors to assess the actual performance in real conditions
- D.3.1. Review of current STS and the suitability of integration onto building structures for domestic, commercial and industrial buildings (Month 12). V DONE
- D.3.2. Annual STSM for PhD students and Early-stage researchers on design, fabrication and characterisation of innovative integrated STS/ RES (Month 6, 18, 30, 42) ON-GOING
- D.3.3. Annual Training School to disseminate expertise to PhD students and Early Stage Researchers (Month 18, 30, 42). ON-GOING



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Building Integration of Solar Thermal Systems – TU1205 – BISTS

WG3 continue...

- D.3.4. Report on fabricated integrated STS prototypes optimised for increased efficiency and low cost. Full building services integration (e.g. into existing heating, cooling, hot water) or stand-alone operation but integral to the structure. This will depend on the extent of own research funding allows (Month 36). Need a report ASAP (collaboration between WG1 and WG3)
- D.3.5. Report on the performance of new integrated STS/RES prototypes: A country performance comparison with geographic diversity (South, Central and North Europe), (Month 42).
- D.3.6. Handbook for architects and building services engineers on the developed BISTS solutions for the design market ready products. (Month 46).



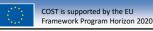




Building Integration of Solar Thermal Systems – TU1205 – BISTS

More on Handbook

- This will include new prefabricated products, a variety of mounting surfaces (vertical, sloped, horizontal) and the use of new materials, like PCM. The handbook will also include the development of BISTS through novel modelling techniques, fabrication and assembly of BISTS prototypes specifically tailored to building element integration, performance measurement of novel BISTS and the suggestion of standardised procedures and the determination of a range of applications for BISTS.
- → WG 3 to coordinate HB not to write it!!







European Cooperation in the field of Scientific and Technical Research

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Building Integration of Solar Thermal Systems - TU1205 - BISTS

Short Term Scientific Missions (STSM)

- Duration 5 days to 3 months (max. 6 month for ESR)
- Overall cost:
 - Max 2500 EUR for STSM up to 3 months
 - Max 3500 EUR over 3 months (ESR)
- Calculation based:
 - Daily allowance: 60-90 EUR
 - Travel: 300 EUR







European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

In our Action:

- 4 STSM are planned for third year. NONE carried out
- Total Budget 6,000 EUR (1500/stsm).
- Use STSM almost exclusively to prepare Action deliverables.
- Any applications to STSM manager first.
- Then application should proceed through the e-cost system.
- Needs to be completed by 29/4 (those interested make arrangements during the meeting).







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European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

Publications, dissemination and outreach activities

- These will also be discussed in following sessions.
- First publications were due month 12 (April 2014).
 - Out of the three deliverables the book on BISTS was published.
- Next major event is Action Conference
 - Everybody should participate normal activity of the Action
 - Need at least a paper by each group on BISTS.
 - More on this later... and on parallel sessions of the WGs.







Building Integration of Solar Thermal Systems – TU1205 – BISTS

Handbook publication

- Need to have state-of-the-art material.
- Need to deliver on time. This is a serious commitment – to produce something valuable.
- Work already allocated from previous meetingprogress to be discussed in parallel sessions and in coordination meeting later.
- Now is NOT too early any more.... Need to proceed with a fast pace....



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- Web news covered tomorrow in WG4 session (12.30-13.00)
- AOE







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European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

Structure of the Action

Action Chair: Soteris Kalogirou

· Action Vice Chair: Mervyn Smyth

• WG1 Leader: Werner Platzer* (Dep. Aleksandra Krstic)

WG2 Leader: Daniel Chemisana (Dep. Alberto Coronas)

WG3 Leader: Aggelos Zacharopoulos (Dep. Jayanta De Mondol)

• WG4 Leader: Brian Norton/David Kennedy

• STSM Manager: Gilles Notton

- Steering Group (SG): Action Chair, Vice-Chair and WG leaders.
- * Need to find a replacement as he is relocated to Chile.







Building Integration of Solar Thermal Systems – TU1205 – BISTS

Closing - rest of meeting - Day 1

- Coffee break (11.00-11.30)
- WGs (1-3) parallel sessions (11.30-13.30) Rooms nearby, Daniel will show us the way.
- Lunch (13.30-14.30)
- Scientific Session (14.30-16.00).
- Coffee break (16.00-16.30)
- Working Groups (1-3) Coordination meeting (all) (16.30-17.30)
 - Explain the work that remains to be done.
- Official dinner (21.00). Meet at 19.00 at La Pedrera House.
- Restaurant "Sal Cafe". Details by Daniel (next slide).









Building Integration of Solar Thermal Systems – TU1205 – BISTS

Closing – rest of meeting – Day 2

- WG (1-3) Parallel session Planning of work to be done Finalising deliverables, Projects, Training School 2017, Action Conference (9.00-10.30)
- Coffee break (10.30-11.00)
- WG (1-3) Coordination Meeting (11.00-12.30)
 - Agree time table refresh tasks to be done (names/dates)
- WG 4. Dissemination Activities (all) (12.30-13.00)
- 13:00 14:00: Lunch
- Management Committee meeting (all) planning of next meeting and subsequent activities (14.00-15.00)
- 15.00 End of meeting.



EURPEAN COPERATION



European Cooperation in the field of Scientific and Technical Research

Building Integration of Solar Thermal Systems – TU1205 – BISTS

Practical details

- To cover the coffee breaks, two light meals and tonight's dinner you need to pay 30 Eur each to Charalambos during coffee break.
- You will get refund for this expense on the OTTR form.



