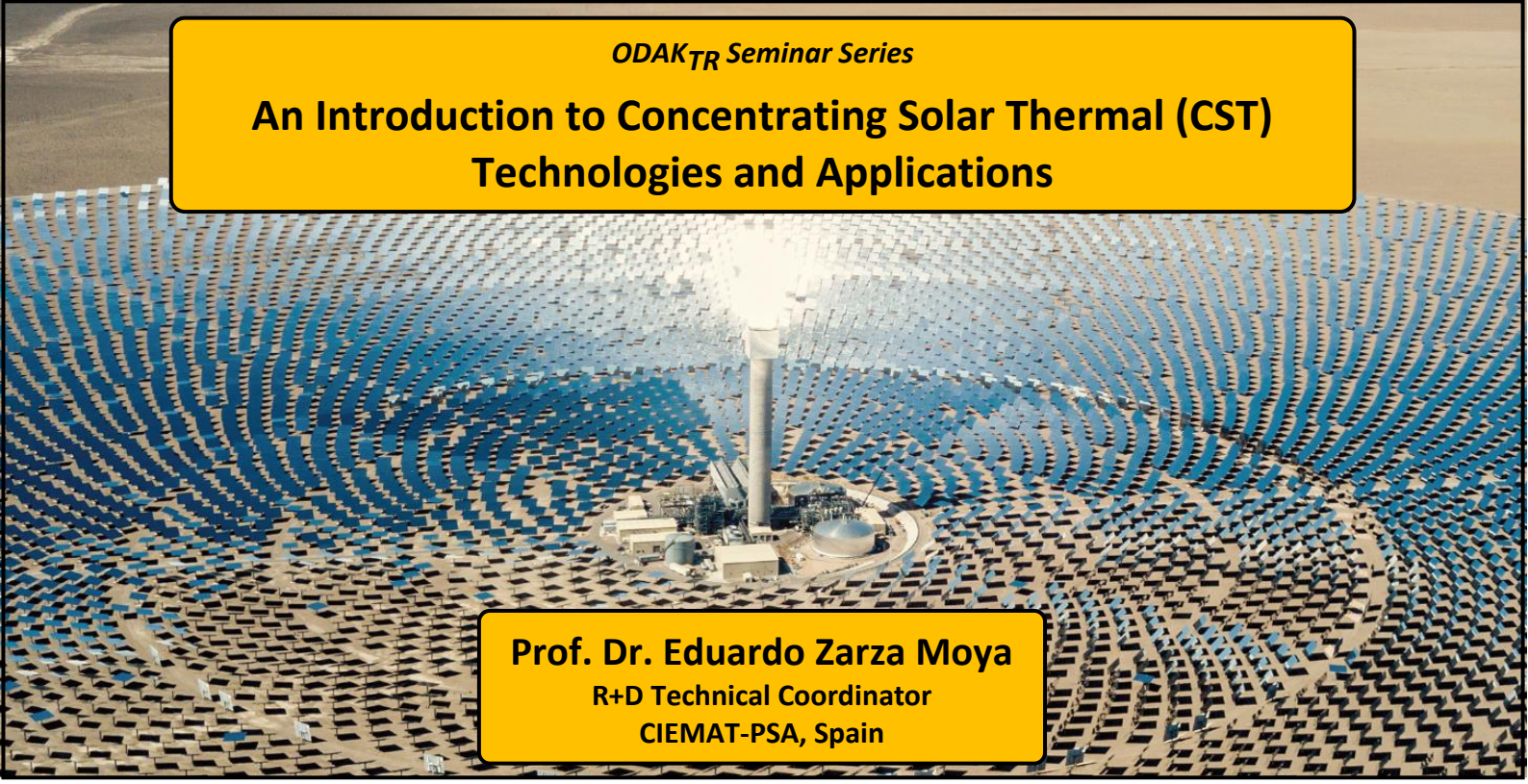

ODAK$_{TR}$ Seminar Series

An Introduction to Concentrating Solar Thermal (CST) Technologies and Applications

Prof. Dr. Eduardo Zarza Moya
R+D Technical Coordinator
CIEMAT-PSA, Spain

Live Seminar Time and Date*: 12:00-13:00 (Turkish time / GMT + 3)
Friday, 18 Dec. 2020

Recorded Seminar: Not Recorded

Registration for live seminar closes at 10:00, Thursday, 17 Dec. 2020: To receive the link to the live seminar you must register by 10:00, Thursday, 17 Dec. 2020. Attendance to the live seminar will be limited and if necessary people who register last will only be given a link to the recording of the seminar.

Abstract: In this seminar an introduction to Concentrating Solar Thermal (CST) technologies and applications will be given as follows: 1) Basic aspects of CST systems; 2) CST technologies (description, different plant configurations, different working fluids); 3) Main applications for CST technologies (electricity generation and industrial process heat); and 4) Brief overview of current high-priority CST Research and Development (R+D) topics.

Short Bio: Eduardo Zarza is the R+D Technical Coordinator at Plataforma Solar de Almería (PSA), which is part of Spain's Center for Energy, Environment and Technological Research (CIEMAT). He has been working for 35 years on CST systems. His expertise is in the technology of parabolic trough collectors, including development of components, investigation of new working fluids for solar receivers (direct steam generation, sCO2, etc.) and solar thermal systems applications. He is member of the Scientific Committee of ESTELA, and the Spanish representative for the SolarPACES's Executive Committee. He is presently collaborating or previously collaborated with METU-GUNAM on the following EU H2020 and FP7 Projects: 1) SolarTwins; 2) HORIZON-STE; 3) SFERA-III; 4) INSHIP; and 5) EU-SOLARIS.

About CIEMAT-PSA: CIEMAT-PSA is the largest CST research, development and test center in Europe and is the headquarters for the CST European Research Infrastructure Consortium (ERIC) EU-SOLARIS currently being created.

About CST: CST is an umbrella term that includes Concentrating Solar Thermal technologies for electricity generation, industrial process heat, and solar fuels. CST is a generalization of the historically more common acronyms CSP (Concentrated Solar Power) and STE (Solar Thermal Electricity) that narrowly refer to CST technologies for electricity generation. The use of solar thermal technologies specifically for industrial process heat is referred to as Solar Heat for Industrial Processes (SHIP), or equivalently Solar Industrial Process Heat (SIPH), and includes solar-thermal driven water treatment and desalination processes.

About ODAK$_{TR}$: *ODAK$_{TR}$* is a national CST initiative led by METU-GÜNAM with objectives to

1. Support Turkey's energy transition through the development & commercialization of CST technologies;
2. Catalyze domestic CST economic activity by supporting growth in markets, industrial capacities, and industrial activities;
3. Strengthen Turkey's CST Research and Innovation (R&I) capacities, including by creating globally competitive CST research opportunities at Turkish universities.

One of *ODAK$_{TR}$*'s main strategies to achieve these objectives is by strengthening and exploiting synergies created by METU-GÜNAM's role as Turkey's National Node for EU-SOLARIS ERIC and participation in 5 EU H2020 projects: 1. SolarTwins; 2. HORIZON-STE; 3. SFERA-III; 4. INSHIP; and 5. GeoSmart.

About the ODAK$_{TR}$ Seminar Series: Through the ODAK$_{TR}$ Seminar Series, leading CST experts from METU-GUNAM's strategic European CST partners CIEMAT-PSA (Spain) and DLR (Germany) will give seminars tailored to support realization of ODAK$_{TR}$'s objectives and targeting the Turkish CST community. The ODAK$_{TR}$ Seminar Series is being executed within the framework of the H2020 Project SolarTwins and this specific seminar is co-sponsored by the Spanish project SOLTERCO.

About the H2020 SolarTwins Project: The aim of the SolarTwins project is to step-up the scientific excellence of the promising CST Research Division *ODAK* of METU-GÜNAM (Coordinator) in collaboration with the internationally leading CST institutions CIEMAT-PSA and DLR. SolarTwins includes 4-weeks of CST summer schools at METU taught by leading experts from CIEMAT-PSA and DLR and METU graduate students co-advised by experts from CIEMAT-PSA and DLR. An expected impact is the establishment of competitively-funded METU-CIEMAT and METU-DLR joint lines of research. SolarTwins has received funding from the Horizon 2020 research and innovation program under grant agreements No 856619.

About the SOLTERCO Project: SOLTERCO is a Spanish Strategic Network promoting the commercial development of CST systems. SOLTERCO members participate in national and international entities that have a significant role in this development.

About METU-GÜNAM's CST Research Division *ODAK*: ODAK includes a diverse set of academics and post-doctoral researchers who are actively contributing to METU-GÜNAM's National and European CST activities:

Burcu AKATA KURÇ	MNT, METU	Feyza KAZANÇ	ME, METU
Derek BAKER	ME, METU	Zöhre KURT	EnvE, METU
Özgür BAYER	ME, METU	Tuba OKTUCU ÖZYURT	EI, ITU
Zeynep ÇULFAZ EMECEN	ChE, METU	İlker TARI	ME, METU
Yelda ERDEN TOPAL	TEKPOL, METU		

Contact: Derek BAKER
dbaker@metu.edu.tr
http://users.metu.edu.tr/dbaker/

EU Projects and Activities Showcased by ODAK$_{TR}$

SolarTwins · HORIZON STE · EU SOLARIS · inship · SFERA III · GEOSMART

ODAK$_{TR}$ Organizing Institutions

ODTÜ METU · GÜNAM Center for Solar Energy Research and Applications · CIEMAT PSA · DLR

Funding Agencies Supporting Projects Showcased by ODAK$_{TR}$

The European Union projects have received funding from the Horizon 2020 research and innovation program under grant agreements No 856619 (SolarTwins), 838514 (HORIZON-STE), 731287 (INSHIP), 823802 (SFERA-III), and 818576 (GeoSmart).

TÜBİTAK

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Türkiye Cumhuriyeti Kalkınma Bakanlığı

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