

**Joint ITN CELTA & TeraApp Summer School
29th International Travelling Summer School on Microwaves and Lightwaves**

	Sa 13.7.	Su 14.7.	Mo 15.7.	Tu 16.7.	We 17.7.	Th 18.7.	Fr 19.7.
10:30 - 8:30		Invited talk - Vladimir Vaks Biomedical spectroscopy	Invited talk - Rashaunda Henderson Passive mmW components	Invited talk - Guillaume Ducournau Photonics communications	Invited talk - Masahiro Asada THz RTDs	Invited talk - Wojciech Knap Non-standard THz devices	Project work (45 min)
		THz photonics, electronics & spectroscopy Acedo Gallardo / Preu	THz imaging and plasmonics Penirschke / Al-Daffaie	Photonics communications De Dios Fernandez / Lazar	Resonant Tunneling Diodes (RTDs) Feiginov / Wernersson	Non-standard THz materials, devices, concepts Erni / Roskos	Project presentation
Coffee break		Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	
THz photonics, electronics & technology Weimann / Krozer		THz imaging and plasmonics Escorcia Carranza / Lissauskas / Sheridan	IEEE Women in Engineering Gender and Cultural Diversity	RTDs, CNTs and other nanodevices Höfling / Figueiredo / Lyubchenko	Modeling & measurements Pladevall / Haisch / Hoffmann	Project presentation	
Workshop: Spin off and IP protection		Materials & simulations Kusserow / Raida		Closing ceremony			
13:00 - 11:00	Arrival and registration with small refreshments	Lunch	Lunch (leaving at 13:30 strict)	Lunch	Lunch (leaving at 14:00 strict)	Lunch	Lunch
			Transfer to Darmstadt		Transfer to Paulskirche		
14:30 - 13:00	open to public	mmW power amplifiers Colantonio / Johansen / Leuzzi	Passport or ID card mandatory!	Materials Naftaly / Yashchyshyn / Hartnagel	Guided city tour	Project work & Company training R&S + Toptica + Keisight + CST + ACST	
Campus tour Group 1		Prof. Meeting	Scientific visit European Space Agency	Boat trip	Project work & Company training R&S + Toptica + Keisight + CST + ACST		
Coffee break		Project work					
16:30 - 14:30	Opening ceremony Prof. Dr. Krozer	Poster session Presentation of student work	Campus tour Group 2	Project work / Prof. meeting	Transfer to Main	Project work & Company training R&S + Toptica + Keisight + CST + ACST	
Lecture-THz electronics & photonics: Current development & research Prof. Dr. Monroy							
19:00 - 17:00							
21:00 - 19:00	Social Dinner - BBQ at Campus Westend	Free evening - see our dinner suggestions in Frankfurt city	Social Dinner in Darmstadt	CELTA/TeraApps ESRs dinner	Local Dinner at Gerbermühle	Free evening - see our dinner suggestions in Frankfurt city	
					River night walk home		

Scientific program

Invited talk	40 min
Lecture	30 min
Workshop/discussion	40 min

Date	Time	Session	Type	Presenter	Title of the talk
Sun 14.7.	8:30 - 9:55	THz spectroscopy	Invited	Vladimir Vaks	Biomedical THz spectroscopy
			1	Pablo Acedo Gallardo	THz spectroscopy for biomedical and clinical applications
	9:55 - 10:30	THz photonics and electronics	2	Sasha Preu	Terahertz photomixer concepts: from material engineering to powerful devices
			3	Nils Weimann	Compound semiconductor transistor technologies for THz applications
	11:00 - 13:00	IP protection	Workshop	Otmar Schöller	Spin-off creation and IP protection
			5	Paolo Colantonio	Microwave and mm-wave solid-state power amplifiers
	14:30 - 16:30	mmW power amplifiers	6	Tom Keinicke Johansen	Millimeter-wave power amplifiers
7			Giorgio Leuzzi	Linear and nonlinear stability analysis of power amplifiers	
Mo 15.7.	8:30 - 10:30	THz imaging and plasmonics	Invited	Rashaunda Henderson	Passive mm-wave components
			8	Andreas Penirschke	Advanced THz detectors: Applications at mmW and THz frequencies for communication systems and particle accelerators
			9	Shihab Al-Daffaie	Plasmonic enhancement in terahertz nanodevices
	11:00 - 12:45		10	Ivonne Escorcía Carranza	CMOS terahertz imagers
			11	Alvydas Lisauskas	THz detectors and imagers
			12	John T. Sheridan	Challenges for the imaging in THz field
Tue 16.7.	8:30 - 10:30	Photonics communications	Invited	Guillaume Ducourmau	THz photonics communications
			13	Cristina de Dios Fernandez	Optical frequency combs: Fundamentals and applications
			14	Josef Lazar	Time keeping in modern communications systems and in other applications
	11:00 - 13:00	Diversity at work	Discussion	Sarah Linz (IEEE WIE)	IEEE Women in engineering: Gender and cultural diversity
		Materials & Simulation	15	Thomas Kusserow	Properties of materials in the optical and THz range
	14:30 - 16:30		Materials for THz	16	Zbynek Raida
		17		Mira Naftaly	Materials for terahertz and microwave optics
18		Yevhen Yashchyshyn		New opportunities in quasi-optical materials characterization in far infrared region	
19		Hans Hartnagel		THz generation by quantum cascade structures based on new semiconductor materials	
We 17.7.	8:30 - 10:30	Resonant Tunneling Diodes	Invited	Masahiro Asada	Resonant-tunneling-diode THz sources and applications
			20	Michael Feiginov	Resonant Tunneling Diodes (RTDs) at THz frequencies
			21	Lars-Erik Wernersson	Partially commercialised work on RTD-wavelet transmitter
	11:00 - 12:45	RTDs, CNTs and other nanodevices	22	Sven Höfling	Resonant tunneling diode photodetectors
			23	José Figueiredo	Resonant tunnelling diode microwave-photonic circuits
24	Dmitry Lyubchenko	Thin carbon nanotube layers for terahertz wave applications			
Th 18.7.	8:30 - 10:30	Non-standard THz materials, devices, concepts	Invited	Wojciech Knap	THz emission and detection in different topological phases of HgCdTe based structures
			25	Daniel Erni	Functionality in nanophotonics: Exploiting the sub-wavelength scale
			26	Hartmut G. Roskos	Surface plasmon-polaritons studied by scattering-type SNOM
	11:00 - 13:00	Modeling & measurements	27	Xavier Oriols Pladevall	Modeling and simulation of quantum electron transport for THz electronics: Application to THz RTDs
			28	Hansjoerg Haisch	Wafer-Level Opto-Electrical High Frequency and Polarization Resolved Spectral Measurements for Integrated Photonics
29	Karel Hoffmann	Microwave vector measurement			