

**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 <b>Biomedical spectroscopy</b>	Invited talk - Rashaunda Henderson <b>Passive mmW components</b>	Invited talk - Guillaume Ducournau <b>Photonics communications</b>	Invited talk - Masahiro Asada <b>THz RTDs</b>	Invited talk - Wojciech Knap <b>Non-standard THz devices</b>	Project work (1 hour)	
		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	Gender and Cultural Diversity IEEE Women in Engineering	RTDs, CNTs and other nanodevices Höfling / Figueiredo / Lyubchenko	Modeling & measurements Oriols / Haisch / Hoffmann	Project presentation		
IP protection and spin-off Weber-Bruls / Schöller	Materials & simulations Kusserow / Raida					Closing ceremony & awards		
14:30 - 13:00	Arrival and registration with small refreshments	Lunch	Lunch (leaving at 13:30 strict)	Lunch	Lunch (leaving at 14:00 strict)	Lunch	Lunch and departure	
			Transfer to Darmstadt		Transfer to Paulskirche			
16:30 - 14:30	open to public	Opening ceremony <b>Prof. Dr. Krozer</b>	Passport or ID card mandatory!	Materials Naftaly / Yashchysyn / Hartnagel	Guided city tour	Project work & Company training <b>R&amp;S + CST + ACST + Toptica</b>		
								Lecture-THz electronics & photonics: Current development & research <b>Prof. Dr. Monroy</b>
Poster session <b>Presentation of student work</b>		Campus tour Group 1		Prof. Meeting	Project work / Prof. meeting	Boat trip		Project work & Company training <b>R&amp;S + CST + ACST + Toptica</b>
		Campus tour Group 2		Coffee break				
21:00 - 19:00	Social Dinner - BBQ at Campus Westend	Free evening - see our dinner suggestions in Frankfurt city	Social Dinner in Darmstadt	Dinner of young scientists	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
	9:55 - 10:30	THz photonics and electronics	1	Pablo Acedo Gallardo	THz spectroscopy for biomedical and clinical applications
			2	Sasha Preu	Terahertz photomixer concepts: from material engineering to powerful devices
	11:00 - 13:00	IP protection and spin-off	3	Nils Weimann	Compound semiconductor transistor technologies for THz applications
			4	Viktor Krozer	Terahertz electronics concepts
			Workshop	Dorothee Weber-Bruls	Intellectual property (IP) protection in EU, USA, and China
	14:30 - 16:30	mmW power amplifiers	Workshop	Otmar Schöller	Spin-off creation
5			Paolo Colantonio	Microwave and mm-wave solid-state 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
	11:00 - 12:45		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
			10	Ivonne Escorcia 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
	11:00 - 13:00	Diversity at work	13	Cristina de Dios Fernandez	Optical frequency combs: Fundamentals and applications
			14	Josef Lazar	Time keeping in modern communications systems and in other applications
			Discussion	Sarah Linz (IEEE WIE)	Gender and cultural diversity
	14:30 - 16:30	Materials & Simulation	15	Thomas Kusserow	Properties of materials in the optical and THz range
			16	Zbynek Raida	Optimization of high-frequency structures: Global and local approaches
17			Mira Naftaly	Materials for terahertz and microwave optics	
14:30 - 16:30	Materials for THz	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
	11:00 - 12:45	RTDs, CNTs and other nanodevices	20	Michael Feiginov	Resonant Tunneling Diodes (RTDs) at THz frequencies
			21	Lars-Erik Wernersson	Partially commercialised work on RTD-wavelet transmitter
			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
	11:00 - 13:00	Modeling & measurements	25	Daniel Erni	Functionality in nanophotonics: Exploiting the sub-wavelength scale
			26	Hartmut G. Roskos	Surface plasmon-polaritons studied by scattering-type SNOM
			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			