

URSI Austria Commission Meeting – Graz

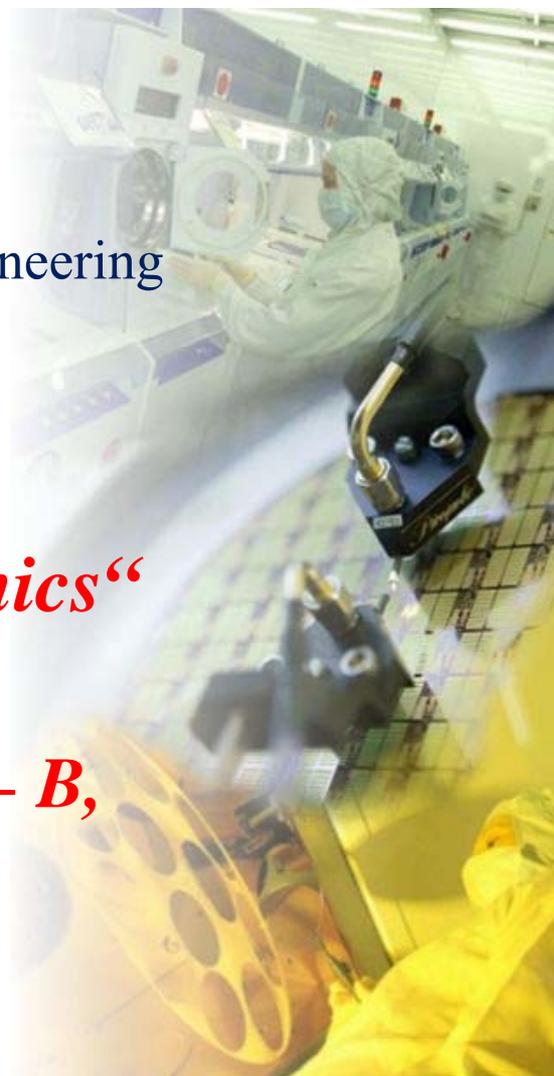
3rd May 2022

Institute for Microwave and Photonic Engineering

*„Activities in Optical
Communications and Photonics“*

*Beitrag der TU Graz zu URSI – B,
Fields and Waves*

 Institut für Hochfrequenztechnik



URSI – Com. B



IHF, Currently involved in 1 COST Action related to
Photonics and Optical Communications

URSI Austria Commission Meeting, Graz

**„Activities in Optical Communications and
Photonics“**

"Contributions of TU Graz in COST Actions"

**“European Network on Future Generation Optical Wireless
Communication Technologies” (NEWFOCUS) CA19111**

CA 15127 (RECODIS, closed), CA 16220 (European Network for High Performance Integrated
Microwave Photonics, closed),

Nationale Projekte: **Vilipa, Phorsch!, CoBCom 2022 Konferenz**

Current CA19111, European Network on Future Generation Optical Wireless Communication Technologies (NEWFOCUS)

COST Action CA19111: 4 major areas, associated with dedicated Working Groups (WGs)

WG1: Ultra-short-range links

WG 2: Short-range links

WG 3: Medium-range links

WG 4: Long-range links

including different Applications Scenarios and co-operations with regulation- and standardization bodies

Kick-Off virtual in September 2020, first STSM's and summer school and workshop in 2021 and 2022



National Research project

VILIPA -Visible light based Person and Group Detection in existing buildings

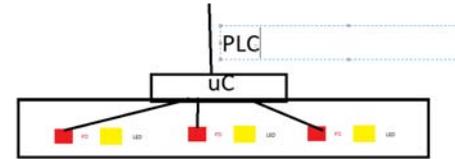
- Programm: Stadt der Zukunft 8. AS
- Funded by:
 - Austrian Research Promotion Agency (FFG)
 - Austrian Ministry for Transport, Innovation and Technology (bmvit)
- Dauer: 9 / 2021 – 12 / 2022
- Partner:
 - Joanneum Research (Materials) – Lead partner
 - Graz University of Technology (IHF)
- Fördersumme FFG für TU Graz: 65K€



VILIPA -Visible light based Person and Group Detection in existing buildings

Leuchtdioden zur Beleuchtung

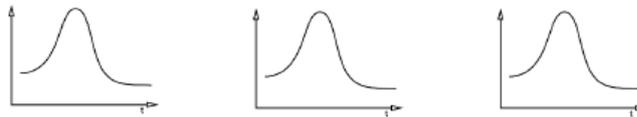
Projektziele



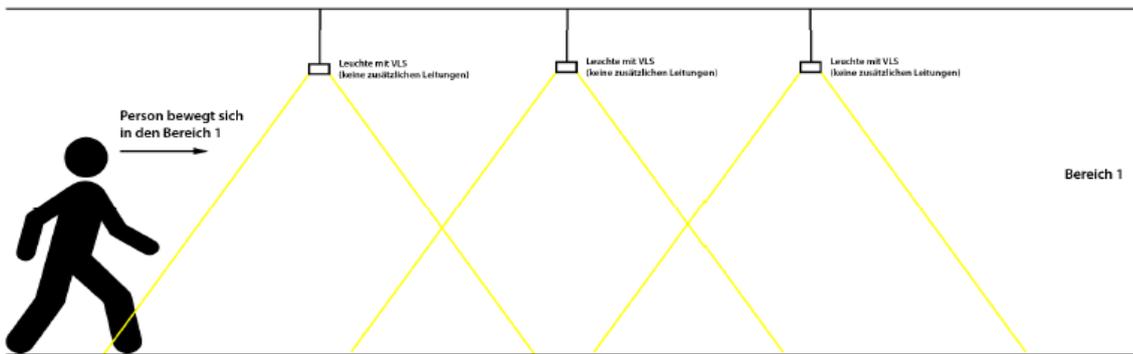
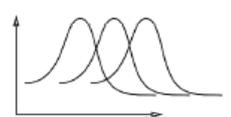
in Kombination mit
Photodioden als Sensoren

zur Auswertung
von Reflexionen
durch Personen

Von der Person verursachte Reflexionen an jeder Leuchte



Datenverarbeitung im Netzwerk



Aufgaben:

- 1.) Erkennen
- 2.) Einzelne Person / Gruppe
- 3.) Geschwindigkeit ermitteln

URSI – Com. B

Phorsch! – Photonik für Schulen!

Im Projekt wird Schüler*innen die Photonik als Schlüsseltechnologie des 21. Jh. durch forschendes Lernen begreifbar gemacht

Photonik, (die Technologie des Lichts), Anwendung im Bereich der Informations- und Kommunikationstechnologie, von Beleuchtung und Displays ebenso wie in der Industrie für Laserproduktionstechnik und Sensorik

FFG Projekt (unter Leitung TU Graz) in Kooperation mit FH Technikum Wien, FH Vorarlberg, Photonics Austria und ams AG; dabei werden an 8 Schulen, in 3 Bundesländern interaktive Workshops zum Thema Photonik abgehalten (Start 5 / 2020)

Kick-Off Meeting 8 / 2020 (FFG Genehmigung 5 / 2020,
Talente regional 7. AS, Laufzeit auf 6 / 2023 verlängert)

Conference Organisation at TU Graz since 2008 at IBK (4410) and since 2011 at IHF (4510)



The Mediterranean Journals:
- Computer & Networks
- Electronics & Communications

IEEE Communications
Chapter - UK/RI

2008 and 2011 Communication field: CSNDSP 08 and ConTEL 2011 (starting activities)



6th Symposium on Communication Systems, Networks and Digital Signal Processing (**CSNDSP 08**), 23-25 July 2008, ~ 250 Participants

11th International Conference on Telecommunications (**ConTEL 2011**), June 15-17, 2011, *always in Zagreb before*, ~ 200 Participants, together with COST IC0802 Meeting and Workshop

2022 and 2023

CoBCom 2022 *new Conference initiated in 2016*

In 2022, 4th International Conference on Broadband Communications for Next Generation Networks and Multimedia Applications, Graz, July 12th - 14th, **2022**, <https://www.cobcom.tugraz.at>

CoBCom 2020 ... completely virtual ... COVID-19

ConTEL 2023 *since 2011 every 4 years in Graz, before every 2 years in Zagreb (also planned at Graz University of Technology, <http://www.contel.hr/>)*

COST Actions: IC1101 (till 2016) followed by CA19111

TU Graz: COST Actions im Überblick

Contributions of the OptiKom_IHF_TUG at Institute for Microwave and Photonic Engineering TU Graz in international projects, URSI Austria and to Photonics Austria

COST Actions: In 2020 CA 15127 (RECODIS, closed in spring 2020), CA 16220 (started in 2017), “European Network on Future Generation Optical Wireless Communication Technologies” (NEWFOCUS) CA19111, (Kick-Off in 11/2017)

URSI – B “Fields and Waves”