



6G Workshop

Welcome and Introduction to CGC 6G Research

*Prof. Ramjee Prasad, President CTIF Global Capsule,
Department of Business Development and Technology, Aarhus University, Herning, Denmark*



6G Workshop Programme – Morning Sessions

Time (CET)	Topic
09:00hrs	Welcome and Introduction to CGC 6G Research Ramjee Prasad, CGC International
09:30hrs	Enabling Technologies for Next Generation Telepresence Systems Albena Mihovska, CGC Denmark
10:15hrs	<i>Coffee Break</i>
10:30hrs	6G: A Gateway to the Pervasive Intelligence Applications Ambuj Kumar, CGC Denmark
11:15hrs	6G - The Last Generation Martijn Kuipers, CGC Portugal
12:00hrs	<i>Lunch break</i>
12:45hrs	

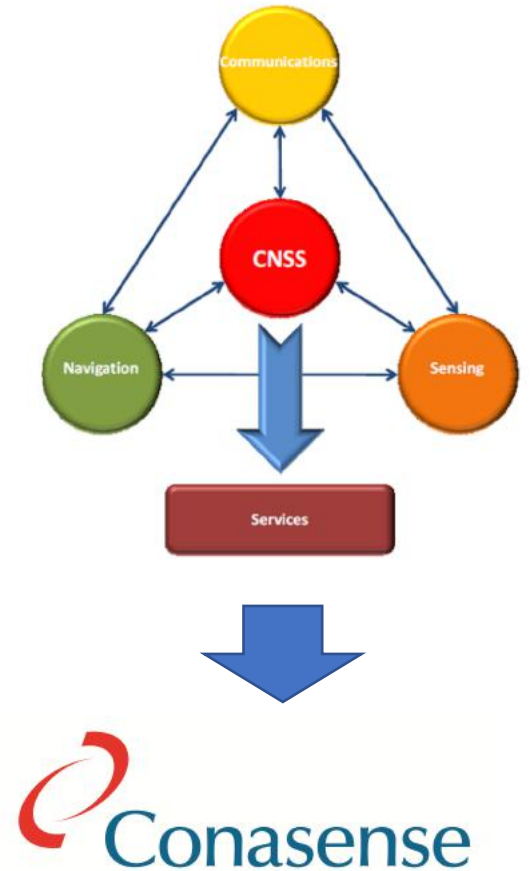
6G Workshop Programme – Afternoon Sessions

Time (CET)	Topic
12:45hrs	6G a Key Enabler for Large-scale Drone Services- Opportunities and Challenges Muhammad Bilal, CGC Denmark
13:30hrs	Quantum Physics applied for engineering the future architecture of the 6G Networks Paulo Sergio Rufino Henrique, CGC France (Spideo)
14:15hrs	<i>Coffee break</i>
14:30hrs	Why 6G? Impact on our life and beyond Neeli Rashami Prasad, CGC USA
15:15hrs	Brainstorming session Chair: Peter Lindgren, CGC International
16:00hrs	Closing remarks Ramjee Prasad, CGC International

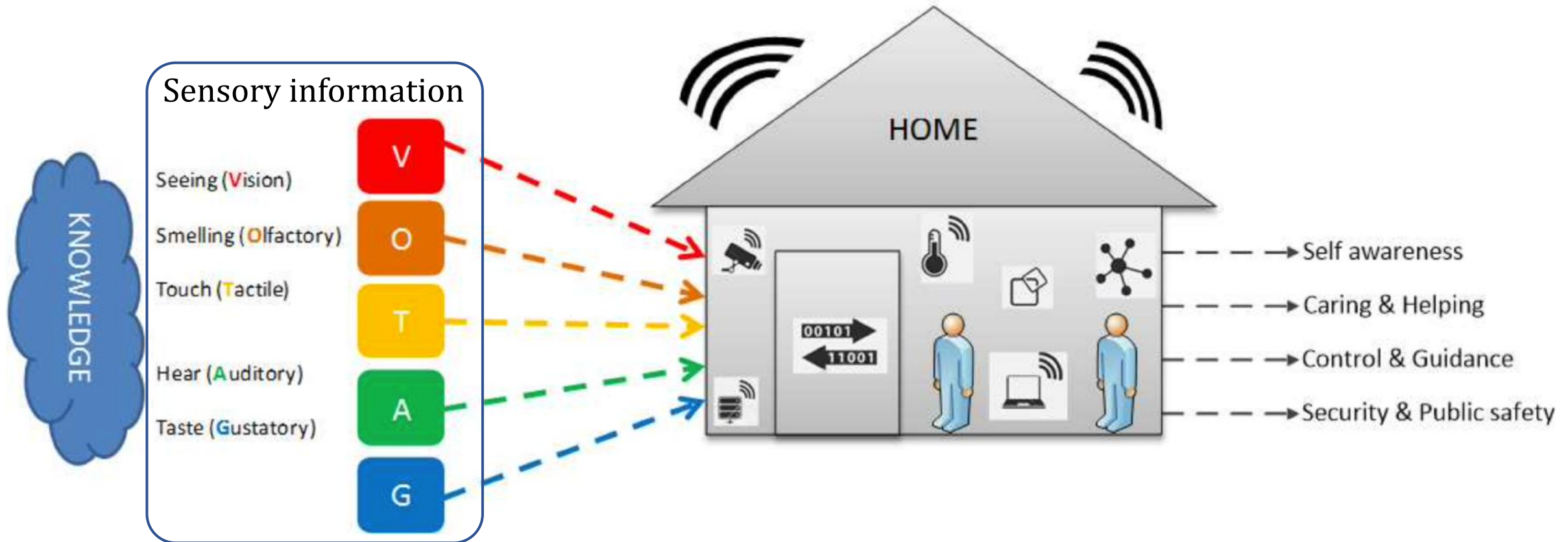
CGC 6G Vision

Key Drivers to 6G roadmap:

- CONASENSE
- SDGs (Sustainable Development Goals) 2030
- QUANTUM TECHNOLOGIES
- SOCIETY 5.0
- SMART CITIES U4SSC (United 4 Smart Sustainable Cities)
- BEYOND INDUSTRY 4.0
- KNOWLEDGE HOME



The Knowledge Home



CGC – 12 Research Arms towards 6G

Holographic telepresence systems (HTPS)

- Holoportation and Mixed reality
- Multimodal Communication
- Immersive Telepresence
- Human Computer Interface Combination

Network Without Borders

- Internet of Things (IoT)
- Future Internet and NextGen. Networks
- Management & Source Optimization
- Cooperative Communication Techniques

Personalized Medicine

- Bio Informatics
- Multi Sensor Networks
- Body Sensors
- Assisted Living
- Dentistry

Chitt-Kaya Nivesh Sthaan

- Human, Mind & Body
- Human, Mind & Brain
- Tele-Medicine
- Holistic Approach For Human Betterment

Security, Trust & Privacy

- Identity Management
- Physical-Layer Security
- Routing Protocols
- Data Protection & Ethical Guidelines

Autonomic Transport system

- Intelligent Transport System
- Traffic Engineering and Autonomous Computing
- Image Processing and Computer Vision
- Automated driving progressed by Internet of Things

CONASENSE

- Communication
- Navigation
- Sensing
- Services

Multimedia Application & Services

- Techno-Socio Systems
- Techno-Socio Economic Impact and Regulatory Framework
- Multimedia Home Networking
- Multimedia Vehicle Networking

Future Wireless Technology

- AI Wireless Communication
- Smart Networks
- Routing Protocols
- Next Generation

Knowledge HOME

- Human Bond Communication
- Communication Beyond 2050
- Human Centric Communication
- Interoperability

Secure Digitalization and Business Model Innovation

- Security in the Digital Ecosystem through MBMI
- Data Integrity and Protection in MBMI Interaction
- Human-based Security
- Technology-based Security

Standardization

- International Telecommunication Union (ITU)
- European Telecommunication Standardization Institute (ETSI)
- Association of Radio Industries and Business (ARIB)
- Global ICT Standardization Forum of India (GISFI)

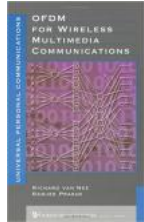




***CGC – 6G Knowledge Lab Opening
Monday December 21, 2020***



CGC – High Citation Publications



OFDM for Wireless Multimedia Communications

Richard van Nee and Ramjee Prasad

Artech House, 2000

Over 7100 citations



Overview of Multicarrier CDMA,

Shinsuke Hara and Ramjee Prasad, IEEE communications

Magazine 35 (12), 126-133, 1997

Over 3100 citations



OFDM for Wireless Communication Systems

Ramjee Prasad

Artech House, 2004

Over 1500 citations

CGC - 5G Books

2014



5G - 2020 and Beyond

Ramjee Prasad

River Publishers

2016

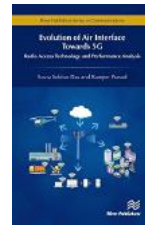


5G Outlook - Innovations and Applications

Ramjee Prasad

River Publishers

2018



Evolution of Air Interface Towards 5G: Radio Access Technology and Performance Analysis

Suvra Sekhar Das and Ramjee Prasad

River Publishers

CGC – 6G Books

2021



6G - The Road to the Future Wireless Technologies 2030

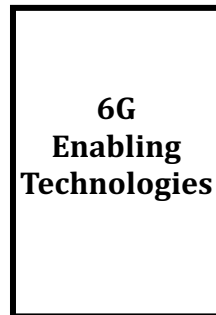
Paulo Sergio Rufino Henrique and Ramjee Prasad

River Publishers

https://www.riverpublishers.com/book_details.php?book_id=920



2021

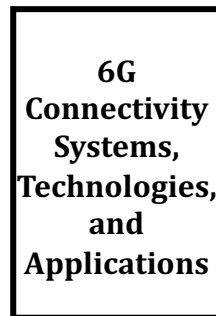


6G - Enabling Technologies

Anand Raghava Prasad and Ramjee Prasad,

River Publishers

2022



6G - Connectivity-Systems, Technologies, and Applications

Albena Mihovska and Ramjee Prasad,

River Publishers

CGC – Selected Publications before 2015

- **Overview of multicarrier CDMA,**
Shinsuke Hara and Ramjee Prasad, IEEE communications Magazine 35 (12), 126-133, 1997
- **Strategies for adaptive frequency hopping in the unlicensed bands,**
Petar Popovski, Hiroyuki Yomo and Ramjee Prasad, IEEE Wireless Communications, Volume: 13, Issue: 6 , 2006
- **MAGNET: An approach for secure personal networking in beyond 3G wireless networks,**
Doru Calin, Andrew R. McGee, Uma Chandrashekar and Ramjee Prasad, Bell Labs Technical Journal, Volume: 11, Issue: 1, 2006
- **Performance Analysis of OFDM Systems with Adaptive Sub Carrier Bandwidth,**
Suvra S. Das, Elisabeth De Carvalho and Ramjee Prasad, IEEE Transactions on Wireless Communications, Volume: 7, Issue: 4 , 2008
- **A universal encoding scheme for MIMO transmission using a single active element for PSK modulation schemes,**
Osama N. Alrabadi, Constantinos B. Papadias, Antonis Kalis and Ramjee Prasad, IEEE Transactions on Wireless Communications, Volume: 8, Issue: 10, 2009
- **Multi-User Interference Cancellation Schemes for Carrier Frequency Offset Compensation in Uplink OFDMA,**
Huan Cong Nguyen and Elisabeth de Carvalho and Ramjee Prasad, IEEE Trans. on Wireless Comm., Vol.: 13, Iss: 3, 2014

CGC – Selected Publications after 2015

- **CONASENSE as a platform for the implementation of human bond communication,**
Maryam Rahimi and Ramjee Prasad, IEEE Aerospace and Electronic Systems Magazine, Volume: 33, Issue: 5-6, 2018
- **Impact of 5G Technologies on Industry 4.0,**
Sriganesh K. Rao and Ramjee Prasad, Wireless Personal Communications, Issue: 100, 2018
- **The Consequences of Artificial Intelligence and Deep Learning in a world of persuasive business models,**
Per Valter, Peter Lindgren and Ramjee Prasad, IEEE Aerospace and Electronic Systems Magazine, Volume: 33, Issue: 5-6, 2018
- **Security for Smart Grid in 5G and Beyond Networks,**
Sarmistha de Dutta and Ramjee Prasad, Wireless Personal Communications, Issue: 106, 2019
- **Digitalization of Global Cities and the Smart Grid,**
Sarmistha de Dutta and Ramjee Prasad, Wireless Personal Communications, Issue: 113, 2020
- **6G Service Orchestration for High QoS and QoE Beyond 4K Video Streaming Future Multimedia Services B5G,**
Paulo Sergio Rufino Henrique and Ramjee Prasad (Virtual) Wireless World Research Forum, 18 jan. 2021 → 21 jan. 2021, Malaysia
- **Journey of Artificial Intelligence,**
Martijn Kuipers and Ramjee Prasad, Wireless Personal Communications, 2022 (accepted for publication)



6G Workshop

Defining the future of CGC 6G Research

October 12, 2021 09:00 – 16:00 CET

