

# COST 299, WG2 general presentation

**WG2: Characterization and applications of rare-earth highly-doped fibres**

**The meeting started with a presentation of motivations and goals of this working group**

## **Structure**

1. Study group1: Characterization of highly doped fibers (measurements)
2. Study group2: Modeling and simulation of highly doped fibers
3. Study group3: Applications of highly doped fibers



# COST 299, WG2 Characterization and applications of rare-earth highly-doped fibres

WG2 – SG1

Chairman: Stefano Taccheo

1. Within WG2-SG1 was reported on on-going activity between PhLAM and Polimi on 2 micron lasers. Polimi plan to make soon a first demonstrator using commercial fibre and special fibre Bragg gratings provided by PhLAM. Nice University expressed the interest to join the collaboration and will provide an highly-doped fibre.
2. During WG2 discussion was presented the expression of interest received about SG2 and a main common interest on PMD evaluation in active fibre was defined. Participants: IPHT, FPMS, Liekki, Univ. Geneva, Univ. Nice, Xlim. A round-robin with fibres provided by LIEKKI will be set soon in order to present results to next Technical Meeting. An open call for collaboration was also proposed and partner call will be posted on the new COST299 website.

Other activities are still under definition and refers to:

1. Gas spectroscopy (Polimi/FPMS) and LMA active fiber characterisation (LIEKKI/Polimi).
2. A stronger link with SD2 was also proposed.
3. Polimi/PhLAM/(+Nice?): 2 micron lasers (In progress)
4. Polimi/FPMS: Spectroscopy of CO<sub>2</sub> and HBr gases
5. LIEKKI/Polimi: investigation of LMA fibers

# **COST 299, WG2 Characterization and applications of rare-earth highly-doped fibres**

WG2 – SG2

Chairman: Emil Voiculescu

Within WG2-SG2 was reported on on-going activity started on designing the optimum doping profile for higher order mode discrimination in LMA fibers. 4 participants interested: Polimi, TUC-N, Optoel and Liekki

One presentation from Liekki presented the first steps made on this activity.

This working group is open in receiving more suggestions on activities. Also, close cooperation with SG1 is considered for experimental verifications of modeling.