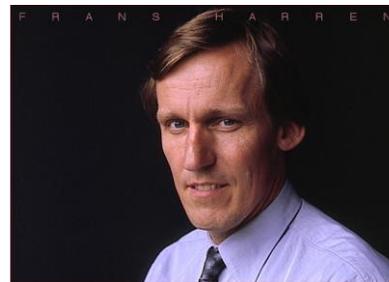


Curriculum Vitae

Dr. F.J.M. Harren, Associate professor
Molecular and Laser Physics
Trace Gas Research Group
Radboud University
F.Harren@science.ru.nl
URL: www.ru.nl/tracegasfacility
Born July 21, 1954, Haarlem, the Netherlands



Frans J.M. Harren completed his PhD in 1988 developing laser-based methods to study trace gas emissions from biological samples. Now he is Associate Professor at the Radboud University Nijmegen.

One of the main and continuously sustained activities of his group has been devoted to the development of state-of-the-art laser spectroscopic methods for the detection of trace gasses relevant for biological and medical sciences. Currently, mid-IR Optical Parametric Oscillators and Quantum Cascade Lasers are used for this, next to latest solid-state laser and optical fiber technology. The focus is, thereby, on state-of-the-art detection of substances at sub-part per billion (volume) concentrations, on-line, non-invasive, with high selectivity and detection speed.

This has led to new insights about the importance of gas exchange in biological and human tissue. In the past, the EU has recognized the research of the group by financially supporting the facility (in the 4th, 5th and 6th Framework programmes) www.ru.nl/tracegasfacility. Research has gained better insight to plant physiology based upon the important, world-best sensitive detection of the plant hormone ethylene. Fermentation processes have been studied via the volatile emissions of ethanol and acetaldehyde from plants and fruit under low oxygen conditions and for the first time direct NO-emission has been observed from plants.

The last years his research moved to mid-infrared Frequency Comb lasers and Supercontinuum sources for the use in Fourier Transform Infrared Spectroscopy. With these systems, a broad spectral coverage at seconds' timescale detections became possible, able to deliver at once high resolution, high accuracy, broad spectral coverage and rapid acquisition.

He published 230 articles (H=44) in refereed journals, presented 97 invited lectures and had 445 other contributions to national and international conferences. In addition, his group had 60 appearances in the general media and other contributions to public events. He had 50 successful applications on research grants at national and international level. With these grants 22 postdocs and 22 PhD students were employed, next to this he supervised 55 bachelor/master students. Among the postdocs, 8 have reached permanent positions at an academic level, and 2 postdocs started a spinoff company. He is member of the international program committees of the International Conference on **Field Laser Applications in Industry and Research (FLAIR)**, Cavity Enhanced Spectroscopy, International User meeting and Summer school, and the OSA Light, Energy and the Environment Congress. He was reviewer of the several EU (FP6, FP7 and H2020) and US (SBIR, DoE, NSF) programmes, next to numerous National programmes.