

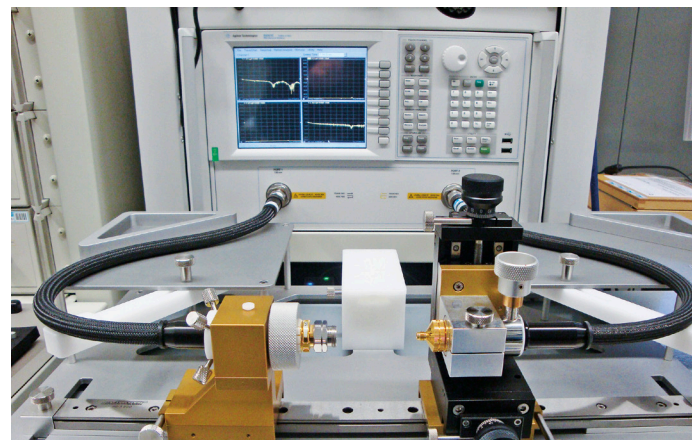


Metrology course

VNA Tools training course

VNA Tools is a free software developed by METAS for measurements with the Vector Network Analyzer (VNA). The software facilitates the tasks of evaluating measurement uncertainty in compliance with the ISO-GUM and vindicating metrological traceability. The software is available for download at www.metas.ch/vnatools. The three day course provides a practical and hands-on lesson with this superior and versatile software.

Date	<ul style="list-style-type: none">• May 3 to 5, 2022 VNA expert day on May 6, 2022• November 1 to 3, 2022 VNA expert day on November 4, 2022
Location	Federal Institute of Metrology METAS Lindenweg 50, 3003 Berne-Wabern
Language	The course will be given in English.
Target audience	Engineers, scientists, technicians and students in metrology, calibration, research and production. Anyone who is required to perform accurate S-parameter measurements and to demonstrate metrological traceability.
Content	<p>The training has a focus on practical usage of the software. Participants bring a laptop to the course and will be guided in the use of VNA Tools through the different steps of a VNA measurement. This covers interaction with the VNA, data taking, VNA calibration, VNA error correction, data visualization, data export, evaluation of uncertainty contributions, uncertainty budget and more.</p> <p>The course however goes beyond a tutorial in software usage. It touches a wide range of conceptual aspects related to VNA Tools and relevant for the quality of VNA measurements in general, just to name a few.</p> <ul style="list-style-type: none">• the powerful generic uncertainty engine METAS UncLib (www.metas.ch/unclib),• the determination of best measurement capabilities,• the role of connector imperfections in the definition of calibration standards and best measurement practice.



Free VNA expert day	State of the art primary S-parameter traceability and how VNA Tools can support it.
Cost	CHF 2,800, lunches and breaks included, without travel and accommodation. VNA expert day free for course participants.
Registration	<p>The number of participants is limited to 16. Registration by mail, at least one month before the course at sekretariat@metas.ch.</p> <p>METAS reserves the right to cancel the course if the minimum number of participants is not reached.</p> <p>Registrations are final and binding but it is possible to appoint a replacement if unable to attend. The fee is also due in case of no-show, drop out of the training or cancellation on the part of the attendee.</p>
Contacts / Course details	Juerg Ruefenacht or Michael Wollensack: Juerg.Ruefenacht@metas.ch Michael.Wollensack@metas.ch