

## 2-DAY ELECTRONICS-WORKSHOP

### Electronics & Interfaces - Technical Basics and Troubleshooting



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<b>Date &amp; Time:</b>	5. & 6. September 2017	9 am – 5 pm
<b>Location:</b>	Fielax GmbH Schleusenstr. 14 27568 Bremerhaven	
<b>Language:</b>	English & German	
<b>POLMAR credit points:</b>	2	
<b>Registration:</b>	<a href="mailto:info.polmar@awi.de">info.polmar@awi.de</a>	

#### Course content:

Today, more and more scientific devices and sensors do not work stand-alone any more but use multiple interfaces to communicate with their surroundings. Sensors transmit data to a computer via serial interfaces or depend on real-time data input from other sensors e.g. GPS receivers or compass sensors. Furthermore the field of marine sensors and systems implies that maintenance services and spare parts are not instantly available and troubleshooting of systems may have to be done by yourself.

This workshop introduces basic knowledge of electronics, common interfaces used in the marine sensors' environment, communication, protocols, software, and plug connections. In practical sessions you will train how to measure in electronic circuits, connect different interfaces, e.g. solder physical plug connections, use hard- and software to build up small sensor networks and troubleshoot malfunctioning connections.

This course offers theory and practice on basic levels, but will also introduce advanced tips and tricks.

The workshop will focus on

- Basics in electronics
- Most common interfaces
- Communication via interfaces, data transfer in networks
- Protocols and software
- Plug connections, e. g. soldering

Previous knowledge is not required. To make the course most suitable for your demands, please answer the following questions and send to [info@fielax.de](mailto:info@fielax.de).

1. In which scientific field are you working?

2. Please describe your work.

3. Have you worked with interfaces before?

If yes, which interfaces, which systems and in which context?

4. What are your expectations from the workshop?

5. Are there specific topics you would like to focus on during this workshop?

**Target group:**

Early career scientists working with sensors or self-made instruments and needing more security in handling them.

**Students' comments on this course:**

- Nette Übungen!
- Sehr schön, es hat sehr viel gebracht. Dringlich zu empfehlen wenn man mit "Selbstbaugeräten" arbeitet.
- Very good to learn more -> evtl. "advanced" course?

**More information:** <http://www.fielax.com> or contact [info@fielax.de](mailto:info@fielax.de)

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*Our courses are generally free of charge for all participants. However, they do have a price and can cost as much as 150 € per day per student. Please take this into account when cancelling your place on the last minute.*

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