



Real Time Measurement of Harmonic Power Flows and More

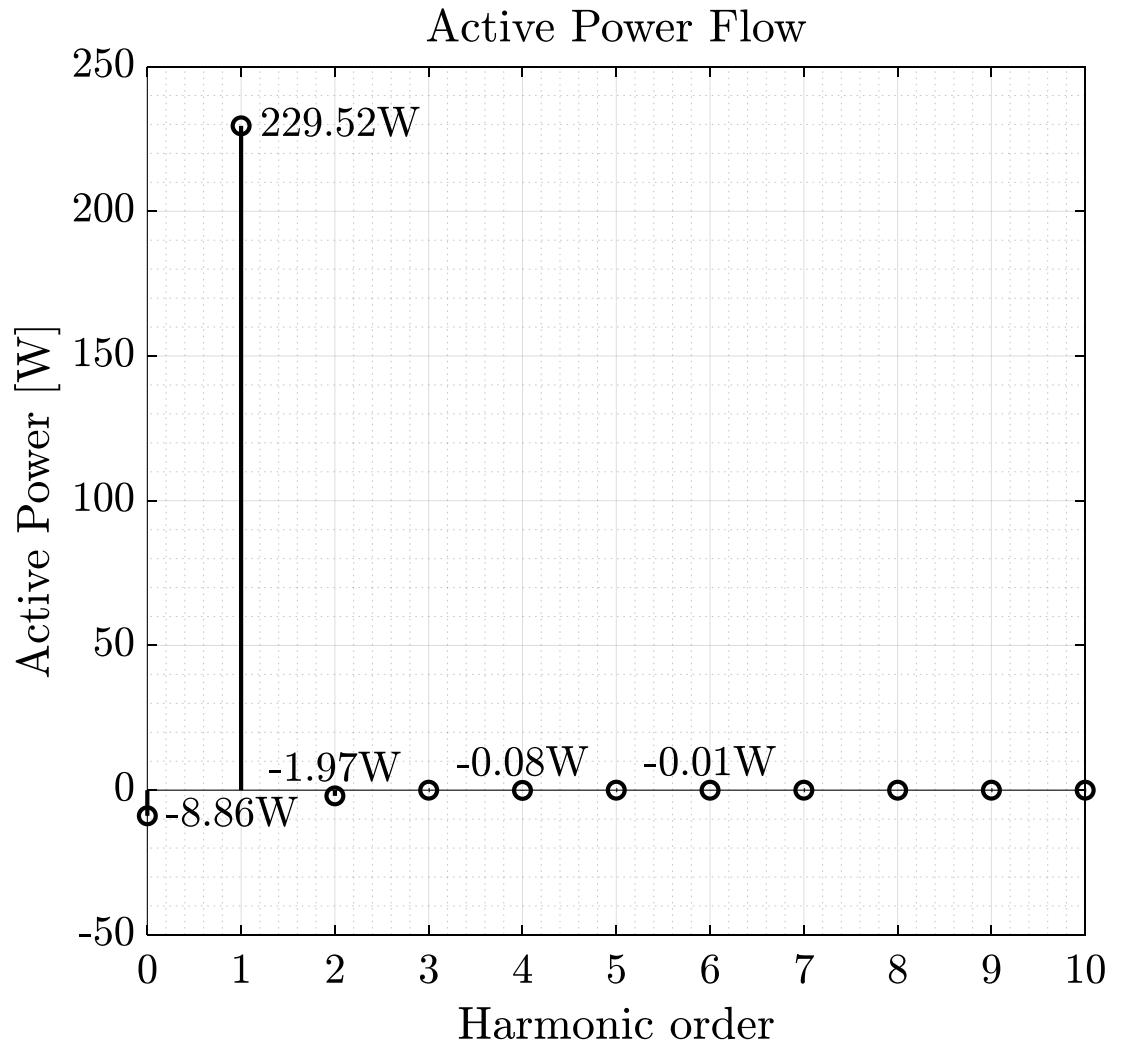
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Gerd Bumiller, Institute of Computer Science, Hochschule Ruhr West

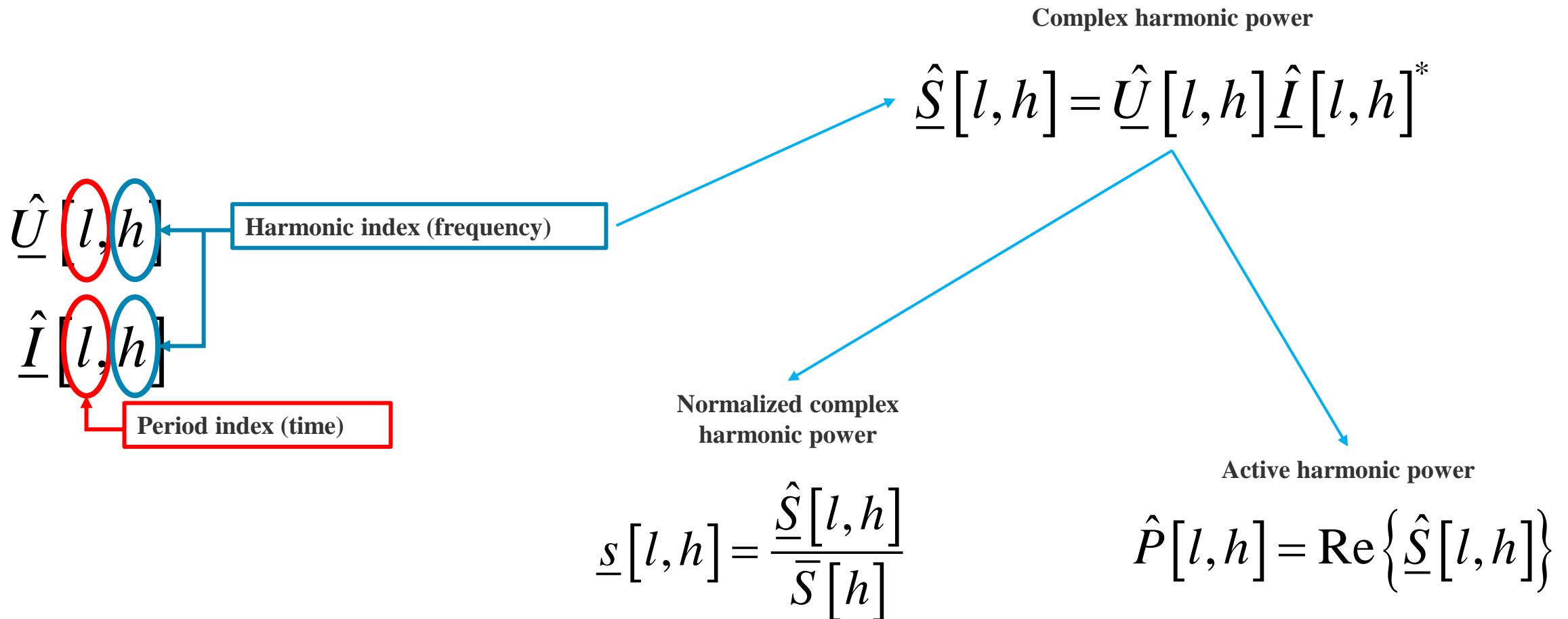
Christoph Szymczyk, Institute of Energy Systems and Energy Management, Hochschule Ruhr West

Motivation

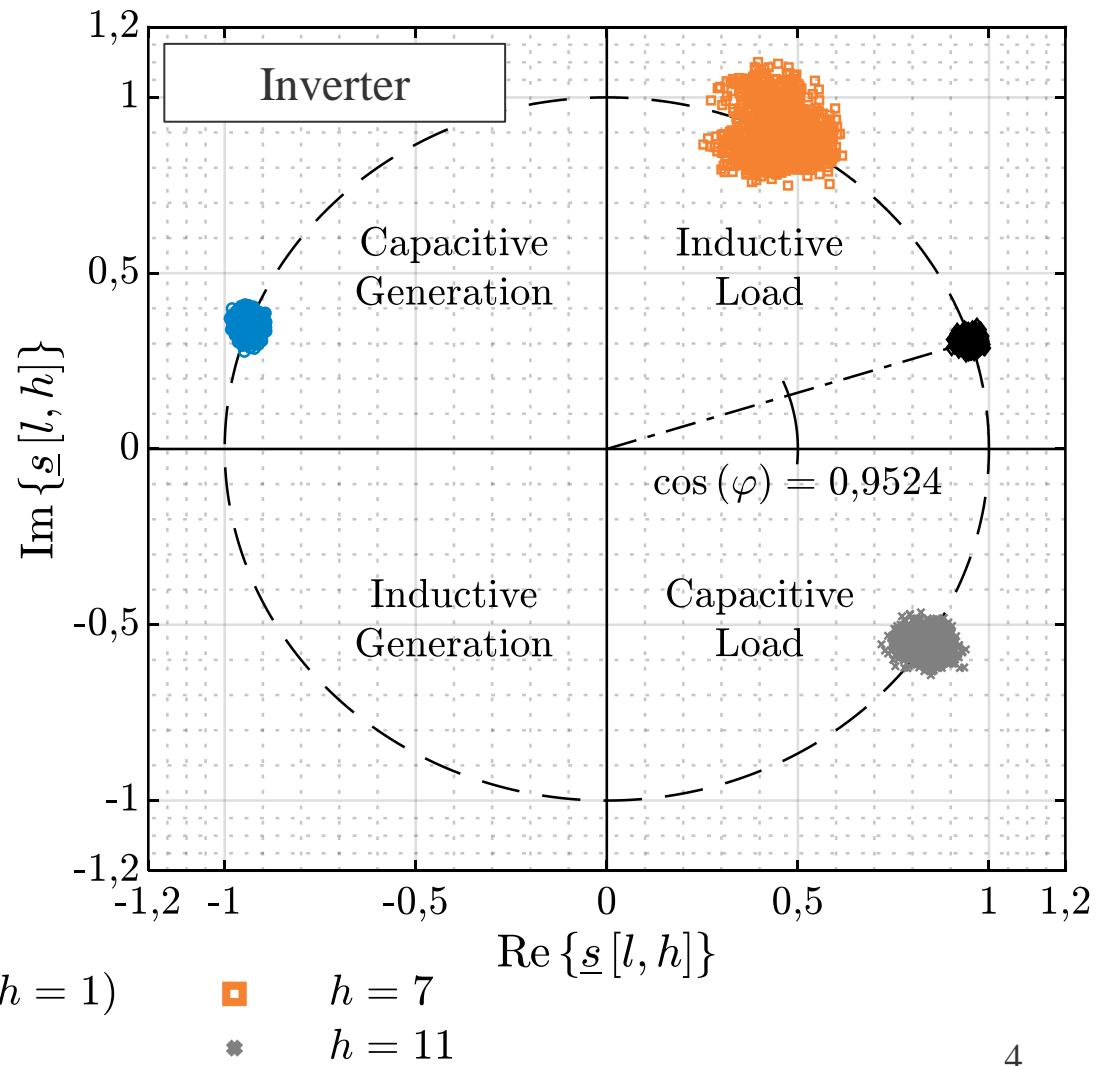
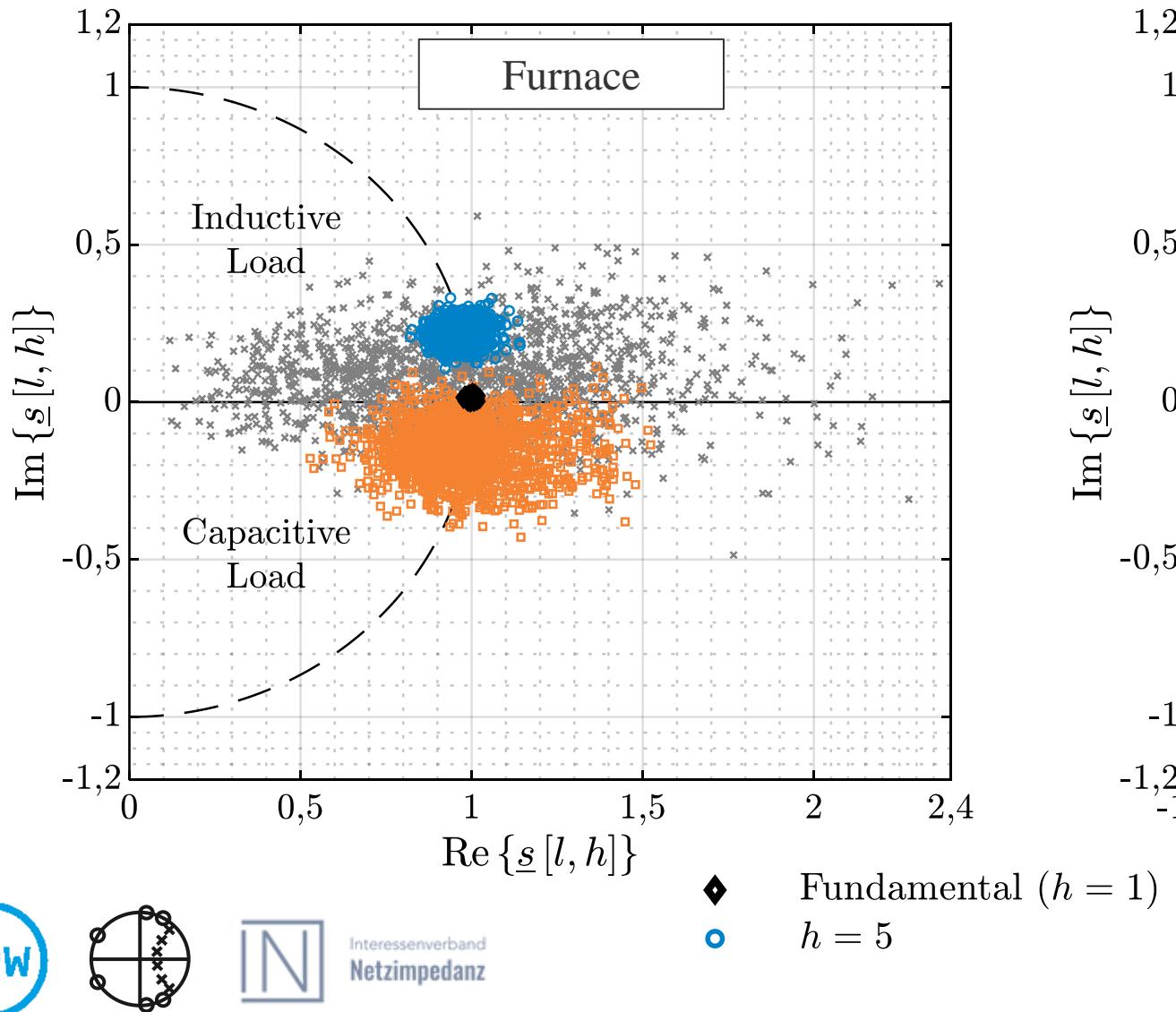
- Non-linear loads cause harmonic distortions in voltage and current
- This results in harmonic power flows
- Accurate estimation of harmonic phasors necessary



What is harmonic power?

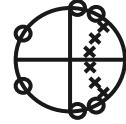


Complex normalized harmonic phasor





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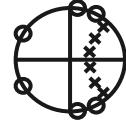
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Live presentation



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Thank you for your attention