



IMPLEMENTATION ON HARMONICS ESTIMATION USING SIGNAL PROCESSING TECHAIQUES

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ABSTRACT:- : **Signal processing** is an enabling technology that encompasses the fundamental theory, applications, algorithms, and implementations of processing or transferring information contained in many different physical, symbolic, or abstract formats broadly designated as signals.^[1] It uses mathematical, statistical, computational, heuristic, and linguistic representations, formalisms, and techniques for representation, modeling, analysis, synthesis, discovery, recovery, sensing, acquisition, extraction, learning, security, or forensics.^[1] According to Alan V. Oppenheim and Ronald W. Schaffer, the principles of signal processing can be found in the classical numerical analysis techniques of the 17th century. Oppenheim and Schaffer further state that the "digitalization" or digital refinement of these techniques can be found in the digital control systems of the 1940s and 1950s.^[2]



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[1] INTRODUCTION

Harmonic voltages and currents in an electric power system are a result of non-linear electric loads. Harmonic frequencies in the power grid are a frequent cause of power quality problems. Harmonics in power systems result in increased heating in the equipment and conductors, misfiring in variable speed drives, and torque pulsations in motors. Reduction of harmonics is considered desirable.

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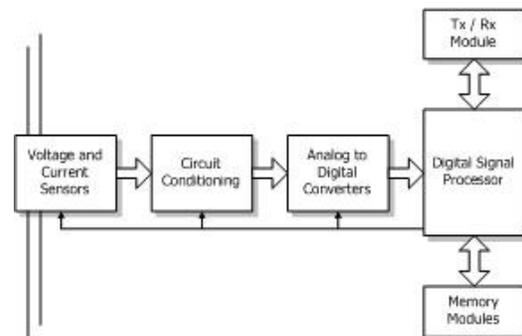


Fig 1 Signal processing

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