

THE FOURIER TRANSFORMATION IN SPECTROSCOPY. FROM MONSIEUR FOURIER TO MEDICAL IMAGING

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The development of the Fourier transform principles from their conception to their fruitful application in biochemical and medical spectroscopy and imaging is sketched. Without the advent of digital computers, their fruitful application to spectroscopy and imaging would not have been feasible. This well explains the explosive development during the past few decades. The revolution of infra-red spectroscopy, nuclear magnetic resonance, electron spin resonance, microwave spectroscopy, time-resolved optical spectroscopy, x-ray crystallography, and medical magnetic resonance imaging by the introduction of Fourier transform concepts will be exemplified.