

**ESMRMB Lecture on Magnetic Resonance:
MR Physics for Physicists, China, October 2006**
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Basic Physics	
Concept of k-space	
Basic Contrast Mechanisms: T1, T2, PD, MT...	
Gradient Echo Techniques:	
Basic Concepts	
Applications and Advanced Concepts	
Spin Echo Techniques	
Basic Concepts	
Applications and Advanced Concepts	
Single Shot Techniques	
EPI, Spirals and Other Techniques	
EPI, Spirals and Others	
Postprocessing and Realtime Adjustments	
Principles of Parallel Imaging and Reconstruction	
Methods and Applications	
Diffusion, Perfusion and Postprocessing	
MR-Angiography and Cardiac Imaging	
Functional MRI and Postprocessing	
Whole Body MRI, Automated Scans	
Hardware	
Magnets	
Gradients	
RF- coils	
Adjustments and Safety, Realtime features	