

# Contents

<b>1</b>	<b>Fundamental Concepts Associated with Magnetic Reconnection</b> .....	1
	W.D. Gonzalez, E.N. Parker, F.S. Mozer, V.M. Vasyliūnas, P.L. Pritchett, H. Karimabadi, P.A. Cassak, J.D. Scudder, M. Yamada, R.M. Kulsrud, and D. Koga	
<b>2</b>	<b>Collisionless Reconnection and Electron Demagnetization</b> .....	33
	J.D. Scudder	
<b>3</b>	<b>MHD Structures in Three-Dimensional Reconnection</b> .....	101
	E. Priest	
<b>4</b>	<b>Energy Conversion and Inventory of a Prototypical Magnetic Reconnection layer</b> .....	143
	M. Yamada, J. Yoo, and S. Zenitani	
<b>5</b>	<b>Rapid Reconnection and Field Line Topology</b> .....	181
	E.N. Parker and A.F. Rappazzo	
<b>6</b>	<b>Reconnection at Earth's Dayside Magnetopause</b> .....	213
	P.A. Cassak and S.A. Fuselier	
<b>7</b>	<b>Magnetotail Reconnection</b> .....	277
	A. Petrukovich, A. Artemyev, and R. Nakamura	
<b>8</b>	<b>Reconnection Separatrix: Simulations and Spacecraft Measurements</b> .....	315
	G. Lapenta, R. Wang, and E. Cazzola	
<b>9</b>	<b>Simulation Studies of Plasma Transport at Earth, Jupiter and Saturn</b> .....	345
	R.J. Walker and X. Jia	
<b>10</b>	<b>Fractal Reconnection in Solar and Stellar Environments</b> .....	373
	K. Shibata and S. Takasao	

<b>11 Theory and Applications of Non-relativistic and Relativistic Turbulent Reconnection</b> .....	409
A. Lazarian, G. Kowal, M. Takamoto, E.M. de Gouveia Dal Pino, and J. Cho	
<b>12 Radiative Magnetic Reconnection in Astrophysics</b> .....	473
D.A. Uzdensky	
<b>13 Annihilation of Quantum Magnetic Fluxes</b> .....	521
W.D. Gonzalez	
<b>Index</b> .....	539