

Index

<i>A</i>	
Asymptotically stable	<i>p.7</i>
<i>B</i>	
Bendixson's theorem	<i>pp.25 – 29</i>
Bifurcation	<i>pp.12 – 13</i>
Bifurcation (fold)	<i>pp.12 – 13</i>
Bifurcation (transcritical)	<i>pp.12 – 15</i>
Bifurcation diagram	<i>pp.12, 15 – 17</i>
<i>C</i>	
Carrying capacity	<i>p.9</i>
Centers (equilibrium point)	<i>pp.22, 26</i>
Coordinate transformation matrix	<i>pp.18, 20</i>
<i>D</i>	
Divergence	<i>pp.25 – 29</i>
<i>E</i>	
Equilibrium point	<i>pp.3 – 4</i>
<i>F</i>	
Finite escape time	<i>pp.9 – 10</i>
Focus node	<i>p.22</i>
Fold bifurcation	<i>pp.12 – 13</i>
<i>G</i>	
Green's theorem	<i>pp.25 – 27</i>
<i>H</i>	
Hartman grobman theorem	<i>pp.23 – 24</i>
Homeomorphic	<i>p.23</i>
Hyperbolic equilibrium point	<i>pp.22 – 24</i>
<i>L</i>	
Limit cycle	<i>pp.10 – 12</i>
Linearization at a fixed point	<i>pp.5 – 8, 23 – 24</i>
Logistic equation	<i>p.9</i>
Lorenz attractor	<i>p.12</i>
<i>M</i>	
Metzler matrix	<i>p.31</i>
<i>N</i>	
Node	<i>p.21</i>
<i>P</i>	
Pendulum	<i>pp.7 – 8</i>
Periodic orbits	<i>pp.25 – 32</i>
Phase portrait	<i>pp.5, 17 – 19</i>
Pitchfork bifurcation	<i>pp.12, 15 – 17</i>
Poincare-bendixson criterion	<i>p.32</i>
Positive invariant set	<i>pp.21, 29 – 32</i>
Positive system	<i>p.31</i>
Predator/prey model	<i>pp.30 – 31</i>
<i>R</i>	

Region of attraction	<i>p.15</i>
<i>S</i>	
Saddle node	<i>pp.19 – 21</i>
Sink node	<i>pp.19, 21</i>
Source node	<i>pp.19, 21</i>
Stability	<i>p.5</i>
Stable	<i>p.5</i>
Subcritical pitchfork bifurcation	<i>p.17</i>
Supercritical pitchfork bifurcation	<i>pp.15 – 16</i>
<i>T</i>	
Taylor series expansion	<i>p.6</i>
Transcritical bifurcation	<i>pp.12 – 15</i>
<i>V</i>	
Van der pol oscillator	<i>pp.11 – 12</i>