

Masayasu Ohtsu  
Editor

# Innovative AE and NDT Techniques for On-Site Measurement of Concrete and Masonry Structures

State-of-the-Art Report of the RILEM  
Technical Committee 239-MCM



 Springer

The Springer logo consists of a stylized chess knight (horse) facing left, positioned above the word "Springer" in a serif font.

# Contents

<b>1</b>	<b>Introduction</b> . . . . .	<b>1</b>
	M. Ohtsu	
<b>2</b>	<b>Concrete Structures</b> . . . . .	<b>5</b>
	Christian U. Grosse, Dimitrios G. Aggelis and Tomoki Shiotani	
<b>3</b>	<b>Masonry Structures</b> . . . . .	<b>27</b>
	Giuseppe Lacidogna, Federico Accornero and Alberto Carpinteri	
<b>4</b>	<b>Computerized AE Tomography</b> . . . . .	<b>47</b>
	Yoshikazu Kobayashi and Tomoki Shiotani	
<b>5</b>	<b>Acoustic Emission Analysis for NDE in Concrete</b> . . . . .	<b>69</b>
	Dimtrios G. Aggelis	
<b>6</b>	<b>Cross-Sectional Visualization of Defects by SIBIE</b> . . . . .	<b>89</b>
	Takeshi Watanabe, Ninel Alver and Masayasu Ohtsu	
<b>7</b>	<b>3D Visualization of Crack Kinematics by AE-SIGMA</b> . . . . .	<b>105</b>
	Kentaro Ohno and Masayasu Ohtsu	
<b>8</b>	<b>Hybrid NDE for Rebar Corrosion in Concrete</b> . . . . .	<b>133</b>
	Yuma Kawasaki, Yuichi Tomoda and Masayasu Ohtsu	
<b>9</b>	<b>On-Site Damage Evaluation by AE and CT in Concrete</b> . . . . .	<b>157</b>
	Tetsuya Suzuki and Masayasu Ohtsu	
<b>10</b>	<b>Overview of Visualized NDE for On-Site Measurement</b> . . . . .	<b>173</b>
	Masayasu Ohtsu	