

# Contents

## Part I Architectures and Technologies for Embedded Smart Cameras

<b>1</b>	<b>Platforms and Architectures for Distributed Smart Cameras . . . .</b>	<b>3</b>
	Marilyn Wolf	
<b>2</b>	<b>A Survey of Systems-on-Chip Solutions for Smart Cameras. . . . .</b>	<b>25</b>
	Ali Ahmadinia and David Watson	
<b>3</b>	<b>Reconfigurable Architectures for Distributed Smart Cameras . . .</b>	<b>43</b>
	Christophe Bobda, Michael Mefenza, Franck Yonga and Ali Akbar Zarezadeh	
<b>4</b>	<b>Design and Verification Environment for High-Performance Video-Based Embedded Systems . . . . .</b>	<b>69</b>
	Michael Mefenza, Franck Yonga and Christophe Bobda	

## Part II Smart Cameras in Mobile Environments

<b>5</b>	<b>Distributed Mobile Computer Vision: Advances, Challenges and Applications. . . . .</b>	<b>93</b>
	Niki Martinel, Andrea Prati and Christian Micheloni	
<b>6</b>	<b>Autonomous Tracking of Vehicle Taillights and Alert Signal Detection by Embedded Smart Cameras . . . . .</b>	<b>121</b>
	Akhan Almagambetov and Senem Velipasalar	
<b>7</b>	<b>Automatic Fall Detection and Activity Classification by a Wearable Camera. . . . .</b>	<b>151</b>
	Koray Ozcan, Anvith Mahabalagiri and Senem Velipasalar	

**Part III Applications**

<b>8</b>	<b>Tracking by Detection Algorithms Using Multiple Cameras. . . . .</b>	<b>175</b>
	Zixuan Wang and Hamid Aghajan	
<b>9</b>	<b>Consistent Human Tracking Over Self-organized and Scalable Multiple-camera Networks . . . . .</b>	<b>189</b>
	Kuan-Hui Lee, Chun-Te Chu, Younggun Lee, Zhijun Fang and Jenq-Neng Hwang	
<b>10</b>	<b>Soft-Biometrics and Reference Set Integrated Model for Tracking Across Cameras . . . . .</b>	<b>211</b>
	Xiaojing Chen, Le An and Bir Bhanu	
<b>11</b>	<b>A Parallel Approach for Statistical Texture Parameter Calculation. . . . .</b>	<b>231</b>
	Narcisse Talla Tankam, Albert Dipanda, Christophe Bobda, Janvier Fotsing and Emmanuel Tonyé	
<b>12</b>	<b>Multi-modal Sensing for Distracted Driving Mitigation Using Cameras and Crowdsourcing. . . . .</b>	<b>257</b>
	Amol Deshpande, Mahbubur Rahaman, Nilanjan Banerjee, Christophe Bobda and Ryan Robucci	
	<b>Index . . . . .</b>	<b>273</b>

<http://www.springer.com/978-1-4614-7704-4>

Distributed Embedded Smart Cameras  
Architectures, Design and Applications

Bobda, C.; Velipasalar, S. (Eds.)

2014, XIV, 273 p. 131 illus., 110 illus. in color.,  
Hardcover

ISBN: 978-1-4614-7704-4