

Day 0 Tuesday, October 29, 2013

08:00~ 09:00	Tutorial Registration <i>42F</i>			
09:00~ 10:30	Tutorial-1 (Part I) Power Line Communication: Introduction and Implementation to Solar Farm Monitoring Prof. Ekachai Leelarasmee <i>Crystal, 42F</i>	Tutorial-2 (Part I) Beyond the Visual And Imagery Based BCI - The New Developments in Spatial Auditory Prof. Tomasz M. Rutkowski <i>Coral, 42F</i>	Tutorial-3 (Part I) Active Noise Control: Fundamentals and Recent Advances Prof. Waleed H. Abdulla and Dr. Iman Ardekani <i>Amber, 42F</i>	Tutorial-4 (Part I) MIMO Signal Processing Techniques to Enhance Physical Layer Security Prof. Y.-W. Peter Hong and Prof. Tsung-Hui Chang <i>Pearl, 42F</i>
10:30~ 10:50	Morning Break			
10:50~ 12:20	Tutorial-1 (Part II) Power Line Communication: Introduction and Implementation to Solar Farm Monitoring Prof. Ekachai Leelarasmee <i>Crystal, 42F</i>	Tutorial-2 (Part II) Beyond the Visual And Imagery Based BCI - The New Developments in Spatial Auditory Prof. Tomasz M. Rutkowski <i>Coral, 42F</i>	Tutorial-3 (Part II) Active Noise Control: Fundamentals and Recent Advances Prof. Waleed H. Abdulla and Dr. Iman Ardekani <i>Amber, 42F</i>	Tutorial-4 (Part II) MIMO Signal Processing Techniques to Enhance Physical Layer Security Prof. Y.-W. Peter Hong and Prof. Tsung-Hui Chang <i>Pearl, 42F</i>
12:20~ 14:00	Lunch			
14:00~ 15:30	Tutorial-5 (Part I) Machine Learning for Multimedia Sequential Pattern Recognition Prof. Koichi Shinoda and Prof. Jen-Tzung Chien <i>Crystal, 42F</i>	Tutorial-6 (Part I) Perceptual Quality Evaluation for Image and Video: from Modules to Systems Prof. Weisi Lin <i>Coral, 42F</i>	Tutorial-7 (Part I) Research Roadmap Driven by Network Benchmarking Lab (NBL): Deep Packet Inspection, Traffic Forensics, WLAN/LTE, Embedded Benchmarking, and Beyond Prof. Ying-Dar Lin <i>Amber, 42F</i>	Tutorial-8 (Part I) Next Generation Video Coding- H.265/HEVC and Its Extensions Prof. Oscar C. Au <i>Pearl, 42F</i>
15:30~ 15:50	Afternoon Break			
15:50~ 17:20	Tutorial-5 (Part II) Machine Learning for Multimedia Sequential Pattern Recognition Prof. Koichi Shinoda and Prof. Jen-Tzung Chien <i>Crystal, 42F</i>	Tutorial-6 (Part II) Perceptual Quality Evaluation for Image and Video: from Modules to Systems Prof. Weisi Lin <i>Coral, 42F</i>	Tutorial-7 (Part II) Research Roadmap Driven by Network Benchmarking Lab (NBL): Deep Packet Inspection, Traffic Forensics, WLAN/LTE, Embedded Benchmarking, and Beyond Prof. Ying-Dar Lin <i>Amber, 42F</i>	Tutorial-8 (Part II) Next Generation Video Coding- H.265/HEVC and Its Extensions Prof. Oscar C. Au <i>Pearl, 42F</i>
17:20~ 18:00	Free Time		APSIPA Technical Activities Board Meeting <i>Amber, 42F</i>	
18:00~ 18:20	Welcome Reception <i>Shimmer, 45F</i>			
18:20~ 21:00			Welcome Reception <i>Shimmer, 45F</i>	

Day 1 Wednesday, October 30, 2013

Registration					
08:00~ 08:30	41F				
Opening Ceremony					
Diamond II, 41F					
Keynote-1					
Artificial Neural Networks for Speech Recognition: A Historical Perspective Prof. Nelson Morgan Diamond II, 41F					
Morning Break					
10:20~ 12:00	OS.1-IVM.1 Perceptual Considerations and Models in Visual Signal Processing <i>Crystal, 42F</i>	OS.2-IVM.2 Intelligent Visual/Image Computation <i>Coral, 42F</i>	OS.3-IVM.3 Technologies for Security and Safety and Those Applications <i>Amber, 42F</i>	OS.4-SLA.1 Signal and Information Processing for Affective Computing <i>Alexandrite, 42F</i>	
	OS.5-SLA.2 Machine Learning for Music Information Retrieval <i>Pearl, 42F</i>	OS.6-SPS.1 Algorithm and Architecture for Orange Computing <i>Agate, 42F</i>	OS.7-BioSiPS.1 Data-Driven Biomedical Signal Processing and Machine Learning Methods <i>Peony, 43F</i>	OS.8-SIPTM.1 Signal and Information Processing Theory and Methods <i>Jade Ballroom, 43F</i>	
Lunch					
12:00~ 13:30	Technical Committee Meetings 1 TC. SIPTM <i>Crystal, 42F</i>		Technical Committee Meetings 2 TC.SLA <i>Coral, 42F</i>		Technical Committee Meetings 3 TC. WCN <i>Amber, 42F</i>
APSIPA Assembly					
Diamond II, 41F					
14:30~ 16:30	OS.9-IVM.4 Multimedia Signal Processing and Applications <i>Crystal, 42F</i>	OS.10-IVM.5 Image and Video Coding <i>Coral, 42F</i>	OS.11-SLA.3 Recent Challenges and Applications on Active Noise Control <i>Amber, 42F</i>	OS.12-SLA.4 Spoken Term Detection <i>Alexandrite, 42F</i>	
	OS.13-SLA.5 Speech Processing <i>Pearl, 42F</i>	OS.14-SLA.6 Language Processing <i>Agate, 42F</i>	OS.15-SPS.2 Signal Processing Systems <i>Peony, 43F</i>	OS.16-SIPTM.2 Advanced Topics in Noise Reduction and Related Techniques for Signal Applications <i>Jade Ballroom, 43F</i>	
Afternoon Break					
16:50~ 18:30	OS.17-IVM.6 Object Modeling and Recognition <i>Crystal, 42F</i>	OS.18-IVM.7 Advanced Image and Video Analysis <i>Coral, 42F</i>	OS.19-IVM.8 Visual Content Generation, Representation, Evaluation and Protection <i>Amber, 42F</i>	OS.20-IVM.9 Multimedia Security and Forensics <i>Alexandrite, 42F</i>	
	OS.21-SLA.7 Recent Advances in Audio and Acoustic Signal Processing <i>Pearl, 42F</i>	OS.22-SLA.8 Speech Recognition (I) <i>Agate, 42F</i>	OS.23-SPS.3 Recent Advances in Digital Filter Design and Implementation <i>Peony, 43F</i>	OS.24-SIPTM.3 Advances in Linear and Nonlinear Adaptive Signal Processing and Learning <i>Jade Ballroom, 43F</i>	
Banquet					
Shimmer, 45F					
18:40~ 21:40					

Day 2 Thursday, October 31, 2013

Registration				
08:00~ 08:40	<i>41F</i>			
08:40~ 09:40	Keynote-2 Advances in Signal Processing for Networked Applications Prof. John Apostolopoulos <i>Diamond II, 41F</i>			
09:40~ 10:00	Morning Break			
10:00~ 12:00	OS.25-IVM.10 Advanced Audio-Visual Analysis in Multimedia <i>Crystal, 42F</i>	OS.26-IVM.11 Visual Data Understanding and Modeling <i>Coral, 42F</i>	OS.27-WCN.1 Green Communications and Networking <i>Amber, 42F</i>	OS.28-SLA.9 Speech Recognition (II) <i>Alexandrite, 42F</i>
	OS.29-SLA.10 Audio Signal Analysis, Processing and Classification (I) <i>Pearl, 42F</i>	OS.30-SPS.4 3D Video Representation and Coding <i>Agate, 42F</i>	OS.31-BioSiPS.2 Biomedical Signal Processing and Systems <i>Peony, 43F</i>	OS.32-SIPTM.4 Information Security and Multimedia Applications <i>Jade Ballroom, 43F</i>
	APSIPA Transactions Editorial Board Meeting <i>Lily, 43F</i>			
	Lunch			
12:00~ 13:30	Technical Committee Meetings 4 TC. BioSiPS <i>Crystal, 42F</i>	Technical Committee Meetings 5 TC. IVM <i>Coral, 42F</i>	Technical Committee Meetings 6 TC. SPS <i>Amber, 42F</i>	
13:30~ 15:30	Forum Session <i>Diamond II, 41F</i>			
15:30~ 15:50	Afternoon Break			
15:50~ 17:50	Plenary Session-1 <i>Diamond II, 41F</i>			
18:00~ 21:00	Cruise Banquet <i>Love Boat</i>	Buffet Dinner <i>The Brasserie, 39F</i>		

Day 3 Friday, November 1, 2013

08:00~ 09:00	Registration <i>41F</i>			
09:00~ 10:00	Keynote-3 Flexible speech Synthesis Based on Hidden Markov Models Prof. Keiichi Tokuda <i>Diamond II, 41F</i>			
10:00~ 10:20	Morning Break			
10:20~ 12:00	OS.33-IVM.12 Emerging Technologies in Multimedia Communications <i>Crystal, 42F</i>	OS.34-IVM.13 3D Image Processing/ Compression, Object Tracking, and Augmented Reality <i>Coral, 42F</i>	OS.35-IVM.14 Intelligent Multimedia Applications <i>Amber, 42F</i>	OS.36-IVM.15 Advanced Image and Video Processing <i>Alexandrite, 42F</i>
	OS.37-IVM.16 Image Enhancement and Restoration <i>Pearl, 42F</i>	OS.38-WCN.2 Wireless Communications and Networking <i>Agate, 42F</i>	OS.39-SLA.11 Expressive Talking Avatar Synthesis and Applications <i>Peony, 43F</i>	OS.40-SLA.12 Toward High-Performance Real-World ASR Applications <i>Jade Ballroom, 43F</i>
12:00~ 13:30	Lunch			
13:30~ 14:50	OS.41-IVM.17 Advanced Visual Media Data Generation, Editing and Transmission <i>Crystal, 42F</i>	OS.42-SLA.13 Audio Signal Analysis, Processing and Classification (II) <i>Coral, 42F</i>	OS.43-SLA.14 Audio and Acoustic Signal Processing <i>Amber, 42F</i>	OS.44-SLA.15 Speech and Audio Coding and Synthesis <i>Alexandrite, 42F</i>
	OS.45-SLA.16 Emotion Analysis and Recognition <i>Pearl, 42F</i>	OS.46-SPS.5 Design and Implementation for High Performance & Complexity-Efficient Signal Processing Systems <i>Agate, 42F</i>	OS.47-BioSiPS.3 Frontiers of BioSiPS in Daily Life <i>Peony, 43F</i>	OS.48-SIPTM.5 Recent Advances in Multirate Processing and Transforms <i>Jade Ballroom, 43F</i>
14:50~ 15:10	Afternoon Break			
15:10~17:10	Plenary Session-2 <i>Diamond II, 41F</i>			
17:10~ 17:40	Closing Ceremony (End of Conference) <i>Diamond II, 41F</i>			
18:00~ 21:00	Board of Governors Appreciation Dinner <i>Ambassador Hotel</i>			

Day 4 Saturday, November 2, 2013

8:30~12:30

Board of Governors Meeting
(Including Strategic Planning)
1106, 11F, Info-Library Building, NSYSU

12:30~1:30

Lunch
Sunset Beach Resort

1:30~

Kaohsiung City Tour

Technical Program Overview

Wednesday, October 30, 2013

10:20 - 12:00

OS.1-IVM.1: Perceptual Considerations and Models in Visual Signal Processing

Chair: C.-C. Jay Kuo, Weisi Lin

- 245 Adaptive Picture-in-Picture Technology Based on Visual Saliency
Shijian Lu, Byung Uck Kim, Nicolas Lomenie, Joo-Hwee Lim
- 286 Effect of Content on Visual Comfort in Viewing Stereoscopic Videos
Bo Chang, FuZheng Yang, Shuai Wan
- 350 No-Reference IPTV Video Quality Modeling Based on Contextual Visual Distortion Estimation
Ning Liao, Zhibo Chen
- 369 Ego Motion Induced Visual Discomfort of Stereoscopic Video
Jongyoo Kim, Kwanghyun Lee, Taegeun Oh, Sanghoon Lee
- 375 Visual-Saliency-Enhanced Image Quality Assessment Indices
Joe Yuchieh Lin, Tsung Jung Liu, Weisi Lin, C.-C. Jay Kuo

OS.2-IVM.2: Intelligent Visual/Image Computation

Chair: Lifang Wu, Jin-Jang Leou

- 41 Inverse Halftoning Based on Edge Detection Classification
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- 141 Virtual-View-Based Stereo Video Composition
Chun-Kai Chang, Hsueh-Ming Hang
- 195 Video Retargeting Using Non-Homogeneous Scaling and Cropping
Jin-Jang Leou, Wen-Yu Yo, Han-Hui Hsiao
- 246 Real-Time Aerial Targets Detection Algorithm Based Background Subtraction
Zhenrong Wu
- 327 Representation of the Player Action in Sport Videos
Zhang Jingwen, Qiu Jiankang, Wang Xiangdong, Lifang Wu
- 338 A New Fast Adopted Image Matching Approach with Arbitrary Rotation
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OS.3-IVM.3: Technologies for Security and Safety and Those Applications

Chair: Masaaki Fujiyoshi, Koichi Ito

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- 295 Generation of All-Focus Images and Depth-Adjustable Images Based on Pixel Blurriness
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- 316 Image Restoration Using Similar Region Search and Digital Watermark
Kazuki Yamato, Madoka Hasegawa, Kazuma Shinoda, Shigeo Kato, Yuichi Tanaka
- 342 Phase-Based Image Matching and Its Application to Biometric Recognition
Koichi Ito, Takafumi Aoki
- 371 Compressing JPEG Compressed Image Using Reversible Data Hiding Technique
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- 379 A Blind Lossless Information Embedding Scheme Based on Generalized Histogram Shifting
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OS.4-SLA.1: Signal and Information Processing for Affective Computing

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- 276 Affective-Cognitive Dialogue Act Detection in an Error-Aware Spoken Dialogue System
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- 277 BFI-Based Speaker Personality Perception Using Acoustic-Prosodic Features
Chia-Jui Liu, Chung-Hsien Wu, Yu-Hsien Chiu
- 293 Feature Space Dimension Reduction in Speech Emotion Recognition Using Support Vector Machine
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- 374 Evaluation on Text Categorization for Mathematics Application Questions
Liang-Chih Yu, Hsiao-Liang Hu, Wei-Hua Lin
- 383 Comparing Feature Dimension Reduction Algorithms for GMM-SVM Based Speech Emotion Recognition
Jianbo Jiang, Zhiyong Wu, Mingxing Xu, Jia Jia, Lianhong Cai

OS.5-SLA.2: Machine Learning for Music Information Retrieval

Chair: Yi-Hsuan Yang, Li Su

- 322 Dictionary Learning with Extreme Sparsity and Sparse Coding for Genre Classification
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- 325 Enhance Popular Music Emotion Regression by Importing Structure Information
Xing Wang, Xiaoou Chen, Deshun Yang, Yuqian Wu
- 354 These Words Are Music to My Ears: Recognizing Music Emotion from Lyrics Using AdaBoost
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- 355 Automatic Transcription of MIDI Signals Based on Probabilistic Model of Two-Dimensional Rhythm Tree Structure Representation
Masato Tsuchiya, Kazuki Ochiai, Hirokazu Kameoka, Shigeki Sagayama
- 362 Identification of Live or Studio Versions of a Song via Supervised Learning
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OS.6-SPS.1: Algorithm and Architecture for Orange Computing

Chair: Jia-Ching Wang, Po-Chuan Lin

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- 343 Framework of Ubiquitous Healthcare System Based on Cloud Computing for Elderly Living
Yang Yen Ou, Po Yi Shih, Jhing-Fa Wang, Shao-Hsien Shih, Ta-Wen Kuam, Yu-Hao Chin
- 349 Graph Based Orange Computing Architecture for Cyber-Physical Being
Anand Paul, Yu-Hao Chin
- 357 Instrumental Activities of Daily Living (IADL) Evaluation System Based on EEG Singal Feature Analisys
Yang Yen Ou, Po Yi Shih, Jhing-Fa Wang, Chen Bo Wei, Chan Sheng Chung, Lin Po Chuan

OS.7-BioSiPS.1: Data-Driven Biomedical Signal Processing and Machine Learning Methods

Chair: Tomasz M. Rutkowski, Yodchanan Wongsawat

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- 365 Single Trial BCI Classification Accuracy Improvement for the Novel Virtual Sound Motion Based Spatial Auditory Paradigm
Yohann Lelievre, Yoshikazu Washizawa, Tomasz Rutkowski

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- 280 Automatic Facial Expression Recognition for Affective Computing Based on Bag of Distances
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OS.10-IVM.5: Image and Video Coding

Chair: Antonio Ortega, Hsueh-Ming Hang

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OS.11-SLA.3: Recent Challenges and Applications on Active Noise Control

Chair: Yoshinobu Kajikawa, Woon-Seng Gan

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- 48 Adaptive Active Noise Control in Free Space
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Jen-Yu Li, Sen M. Kuo, Cheng-Yuan Chang
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- 117 High Priority in Highly Ranked Documents in Spoken Term Detection
Konno Kazuma, Itoh Yoshiaki, Kazunori Kojima, Ishigame Masaaki, Tanaka Kazuyo, Shi-Wook Lee
- 137 Open Vocabulary Spoken Content Retrieval by Front-Ending with Spoken Term Detection
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- 159 Evaluation of the Usefulness of Spoken Term Detection in an Electronic Note-Taking Support System
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- 169 Using Acoustic Dissimilarity Measures Based on State-Level Distance Vector Representation for Improved Spoken Term Detection
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Ken Ichikawa, Satoru Tsuge, Norihide Kitaoka, Kazuya Takeda, Kenzi Kita
- 125 A Prior Knowledge-Based Noise Reduction Method with Dual Microphones
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- 138 Vocal Tract Length Estimation for Voiced and Whispered Speech Using Gammachirp Filterbank
Toshio Irino, Erika Okamoto, Ryuichi Nisimura, Hideki Kawahara
- 143 Suitable Spatial Resolution at Frequency Bands Based on Variances of Phase Differences for Real-Time Talker Localization
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OS.14-SLA.6: Language Processing

Chair: Chung-Hsien Wu, Jianwu Dang

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- 94 Progressive Language Model Adaptation for Disaster Broadcasting with Closed-Captions
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- 148 A New Method for the Objective Perceptual Measurement of Chinese Initials
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- 176 Constructing a Three-Dimension Physiological Vowel Space of the Mandarin Language Using Electromagnetic Articulography
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- 180 Morphological Normalization: A Study of Vowels for Mandarin and Japanese
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Chair: Jiun-In Guo, Ekachai Leelarasmee

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Kazuki Saitoh, Kenji Suyama
- 83 An Avoidance of Premature Convergence in IIR Filter Design Using PSO
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- 121 A Hardware-Efficient Variable-Length FFT Processor for Low-Power Applications
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- 154 Keypoints of Interest Based on Spatio-Temporal Feature and MRF for Cloud Recognition System
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- 199 A New Lattice-Based Adaptive Notch Filtering Algorithm with Improved Mean Update Term
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- 213 Design of FIR Fractional Delay Filter Based on Maximum Signal-to-Noise Ratio Criterion
C.-C. Tseng, Su-Ling Lee
- 258 Fixed Order Implementation of Kernel RLS-DCD Adaptive Filters
Kiyoshi Nishikawa, Yoshiki Ogawa, Felix Albu
- 314 Multi-Touch Points Detection for Capacitive Touch Panel
Chien-Hsien Wu, Ronald Chang, Wei-Ho Chung
- 344 Wireless Packet Collision Detection Using Self-Interference Canceller
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- 360 Modulation Spectrum Power-Law Expansion for Robust Speech Recognition
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OS.17-IVM.6: Object Modeling and Recognition

Chair: Zhiquan Feng, Chia-Wen Lin

- 50 A Novel Direct Feature-Based Seizure Detector: Using the Entropy of Degree Distribution of Epileptic EEG Signals
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- 53 Human Upper Body Posture Recognition and Upper Limbs Motion Parameters Estimation
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- 93 Image Recognition Based on Hidden Markov Eigen-Image Models Using Variational Bayesian Method
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- 98 Point-in-Polygon Tests by Determining Grid Center Points in Advance
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- 150 A Power-Efficient Cloud-Based Compressive Sensing Video Communication System
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- 185 Using Temporal-Domain Peak Interval Determination for Video-Based Short-Term Heart Rate Measurement
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- 251 A Stereo Camera Distortion Detecting Method for 3DTV Video Quality Assessment
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- 261 The Detection of Blotches in Old Movies
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