Face Geometry and Appearance Modeling

Human faces are familiar to our visual systems. We easily recognize a person’s face in arbitrary lighting conditions and in a variety of poses, detect small appearance changes, and notice subtle expression details. Can computer vision systems process face images as well as human vision systems can?

Face image processing has potential applications in surveillance, image and video search, social networking, and other domains. A comprehensive guide to this fascinating topic, this book provides a systematic description of modeling face geometry and appearance from images, including information on mathematical tools, physical concepts, image processing and computer vision techniques, and concrete prototype systems.

This book will be an excellent reference for researchers and graduate students in computer vision, computer graphics, and multimedia as well as application developers who would like to gain a better understanding of the state of the art.

Dr. Zicheng Liu is a Senior Researcher at Microsoft Research, Redmond. He has worked on a variety of topics including combinatorial optimization, linked figure animation, and microphone array signal processing. His current research interests include activity recognition, face modeling and animation, and multimedia collaboration. He has published more than 70 papers in peer-reviewed international journals and conferences and holds more than 40 granted patents.

Dr. Zhengyou Zhang is a Principal Researcher with Microsoft Research, Redmond, and manages the multimodal collaboration research team. He has published more than 200 papers in refereed international journals and conferences and coauthored 3-D Dynamic Scene Analysis: A Stereo Based Approach (1992); Epipolar Geometry in Stereo, Motion and Object Recognition (1996); Computer Vision (1998); and Face Detection and Adaptation (2010). He is an IEEE Fellow.
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