ARMAN SAVRAN

Personal information:

- Member of BUMM in SIMILAR, Bogazici U., Istanbul, Turkey.

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Birthday: 21/11/1981

Sex: Male

Education:

- PhD student in Electrical & Electronic Eng., Bogazici University, Istanbul (Present).
- MS in Electrical & Electronic Eng, Bogazici University, Istanbul, Turkey (2004).
- BS in Electronic & Comm. Eng., Istanbul Technical U., Istanbul, Turkey (2002).

Research experience (field + short summary of work done):

My current research is on *speech & text driven 3D face synthesis*. In this study, the purpose is to synthesize face shapes for visual speech as accurate as, and also as natural as possible from speech and/or text. Hence, in my study the approach is data-driven, i.e. based on facial motion data captured from a speaker. To capture 3D facial motions from speakers, a stereo vision based system, which employs markers (ordinary color stickers) to facilitated tracking, was developed. The system is trained with the speech and the captured motions by a codebook based technique, and then used to animate an MPEG-4 facial animation. This provides realistic coarticulation effects during synthesis. However, to make more natural synthesis, other facial signals apart from visemes (visual speech units) should be generated and fused effectively. These signals are emotions and facial gestures like head motion, eye-blinking, etc, and are often related to prosodic events in the acoustic speech. Therefore, the next step in this research is to produce these facial signals from speech, based on captured motions. Also, synthesis of these signals from textual marks is another issue in this research.

Main Publications (in relation with the workshop themes):

- Savran, A., "Speech and Text Driven 3-D Face Synthesis for the Hearing Impaired", M.S. Thesis, Bogazici University, Sep. 2004.
- Savran, A., L. M. Arslan, L. Akarun, "Speech Driven MPEG-4 Facial Animation for Turkish", SPECOM 2004, St. Petersburg, Russia, Sep. 2004.

Skills I can bring to the eNTERFACE projects:

Graduate Courses

Speech Processing, Image Processing, Computer Vision, 3D Computer Vision, Digital Video Processing, Computer Graphics, Statistical Pattern Recognition, Artificial Neural Networks, Detection & Estimation Theory, Adaptive Filter Theory, Statistical Signal Analysis.

Computer Skills

- Matlab (advanced)
- Programming Languages: C/C++ (Visual C++ .NET), Perl
- Interface APIs: wxWidgets, MFC
- Computer Graphics: OpenGL API, Cg (NVIDIA's GPU programming lang.)
- Computer Vision: OpenCV
- Speech Processing: HTK, Microsoft Speech SDK (for TTS)

Other activities and Hobbies:

- Member of IEEE Signal Processing Society & IEEE Computer Society
- Playing tennis
- Fitness
- Watching movies
- Playing computer games