



Technical University of Crete
School of Electrical & Computer Engineering



**Distributed Multimedia
Information Systems
and Applications
Laboratory**

A 3D Serious Game for Improving Social Skills of Children with ADHD via Multimodal Rythm-Centric Exercises

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Team SURREAL,
<http://graphics.tuc.gr>

What is ADHD & How Music Therapy helps

- ADHD Symptoms

- Inattention
- Impulsivity
- Hyperactivity



Social Disfunctioning



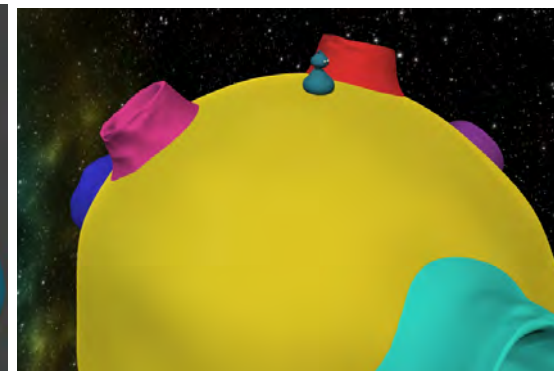
- Isolation
- Low self-esteem
- Depression

- 1 out of 9 children has ADHD (11%)

- **Music Therapy Increases**

- Maintenance of focused attention
- Sense of structure, limits and rules
- Development of cognitive ability
- Self confidence
- Social skills

**Collaborative Rhythm-Centric
Game to Improve
Psychosocial Functioning**



ADDventurous Rhythmical Planet: Story & Interface

Game Story

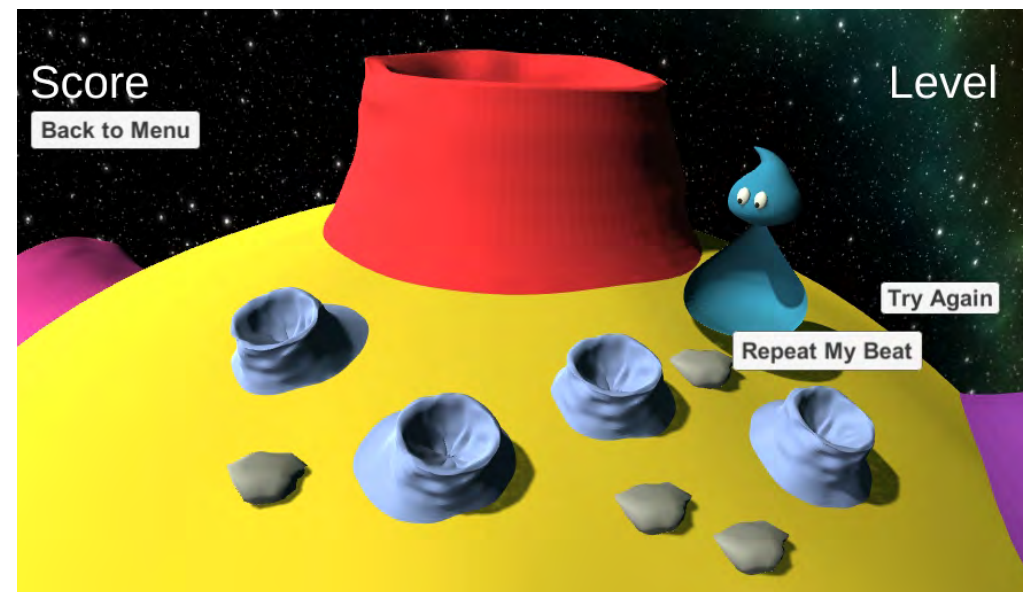
- Alien crashed with her spaceship in foreign planet
- Players need to retrieve the pieces of the spaceship, repair it, and continue their journey
- Craters exchange rhythmic plays for spaceship pieces

Game Play

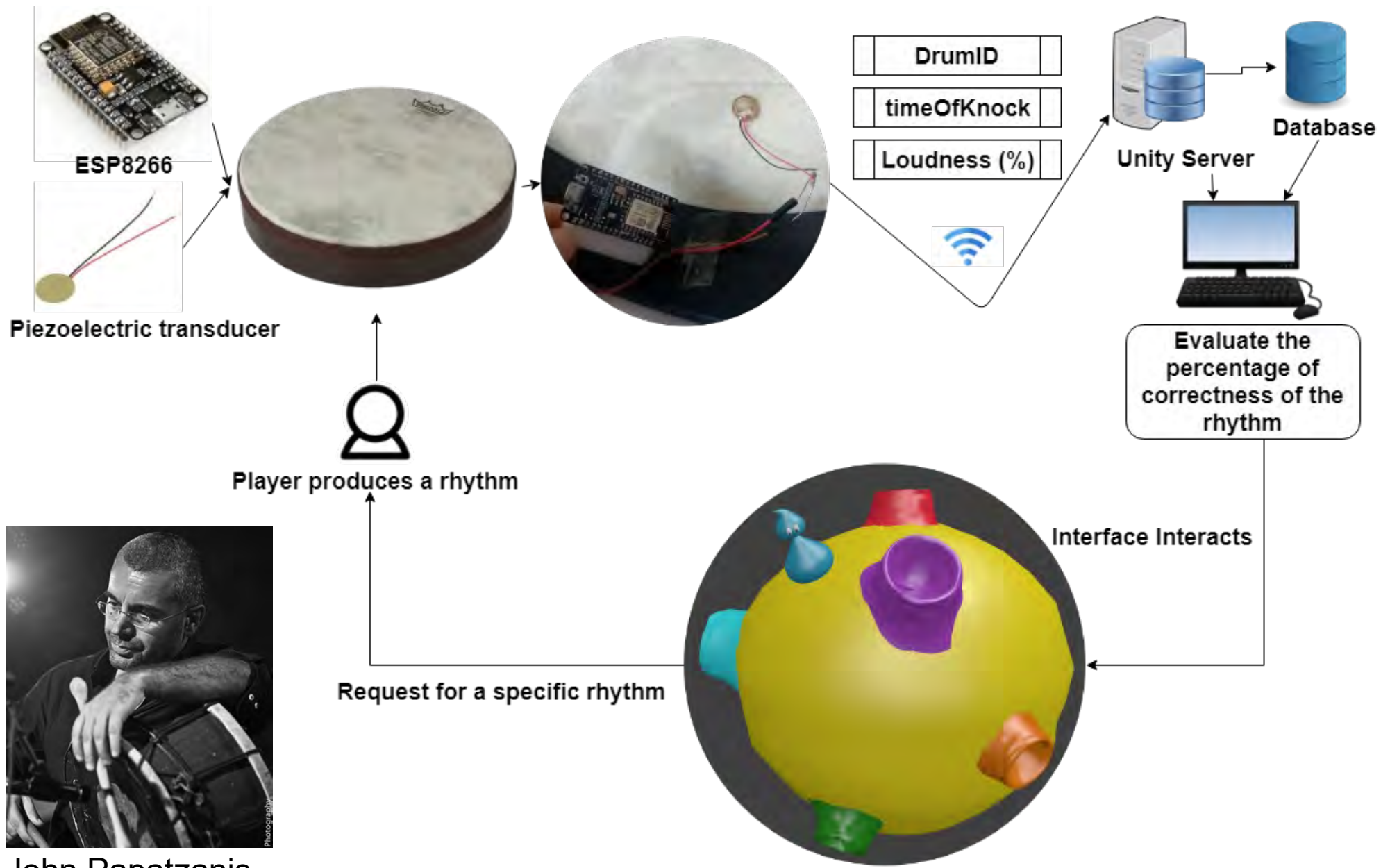
- Single-user mode: Learning basic rhythm concepts
 - Focus attention, Channel excess energy
- Multi-User mode: Players collectively reproduce rhythm
 - Communicate, Synchronize

Result

- **Motivation for socializing**
- **Improvement of overall mental health and self-confidence**



Architecture of the Game



John Papatzanis

Thank You!

- Any questions?

