**General Intro**

Hi, this is Arturo Leon at FIU in Miami.

First of all, I wanted to thank the organizing committee for arranging this event for Marcelo’s 60th birthday.

**I am sorry that** I couldn’t attend this event. My twins are graduating from high school and I have to attend some activities related to their graduation.

**Nonetheless,** I wanted to at least send a very short video wishing Marcelo a very Happy 60th birthday!!!

**Also,** I wanted to show in two minutes some of the work we are currently doing.

1. **Geysers**

We are working on numerical modeling and experiments on geysers and retrofitting strategies.

**We produced** geysers in the lab with heights exceeding 30 m and with characteristics resembling those that occur in the field.

1. **Optimal Operation**

We developed an optimization model for the Columbia River System, which is located in the Pacific North West. This model is helping the BPA on decisions of when and how much power to sell every hour so they can maximize profit.

1. **Low cost-hardware:**

Unlike the classical SCADA system, our hardware is much lower in cost, it is modular, it can use any communication system and is very intuitive for anyone to use

1. **Decision Support System:**

We combine forecasts of precipitation, hydrological modeling, hydraulic routing and genetic algorithm optimization, everything within a parallel framework, for determining optimal flow releases from detention ponds, reservoirs and wetlands with controlled release for minimizing flood damage.

**Recently,** we are trying to expand this for water quality management at the watershed scale.

**Final Statement:**

Finally, This is a photo of my current research group and my twins.

Again, Happy 60th birthday Marcelo!!!!