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# Joint Geometric Analysis Seminar

## On Dirichlet Problem for Minimal Graphs and Lawson-Osserman Constructions

*Professor Ling Yang*

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**Abstract:** We develop the Lawson-Osserman's works on minimal graphs. Firstly, we construct a constellation of uncountably many Lawson-Osserman spheres, which are minimal in Euclidean spheres and therefore generate Lawson-Osserman cones that correspond to Lipschitz but non-differentiable solutions to the minimal surface system. Then, by the theory of autonomous systems in plane, we find for each Lawson-Osserman cone an entire minimal graph having it as tangent cone at infinity. Further, in addition to the truncated Lawson-Osserman cones, we discover infinitely many analytic solutions to the Dirichlet problem of minimal surfaces system for boundary data induced by certain Lawson-Osserman spheres. As a corollary, those Lawson-Osserman cones are non-minimizing. These behaviors are observed for the first time. This is the joint work with Prof. Xiaowei Xu and Yongsheng Zhang.

Date: Tuesday, 23 January 2018  
Venue: Room 502A, Academic Building No.1,  
The Chinese University of Hong Kong, Shatin  
Time: 4:00 p.m. – 5:00 p.m.

*All are Welcome!*