

# Schedule of Texas PDE 2008

Saturday, April 5, 2008 (All talks in Academic Building A405)

| Time        | Speaker   | Title   |
|-------------|---|---|
| 8:30–8:45   | <b>Opening remarks</b>                                  |   |
| 8:45–9:05   | Shishen Xie   | An approach for solving a nonlinear integro-differential equation   |
| 9:10–9:30   | Lokenath Debnath  | Initial value problems of generation and propagation of waves in a rotating fluid                                     |
| 9:35–9:55   | Goong Chen  | The time variable as the dependent variable for the diffusion equation  |
| 10:00–10:20 | Jianxin Zhou  | Some mathematical theory on computing multiple solutions to non-cooperative differential systems                      |
| 10:25–10:45 | Prabir Daripa   | Diffusive slowdown of instabilities in three-layer Hele-Shaw flows with viscosity gradient                            |
| 10:50–11:10 | Jianzhong Wang  | Diffusion PDE associated with bilateral filter  |
| 11:15–11:35 | John Alford   | Stimulated unidirectional propagation in heterogeneous excitable media  |
| 11:40–12:00 | Roy Ranadhir  | Ill-posed inverse problems in molecular imaging   |
| 12:05–13:25 | <b>Lunch break</b>                                      |   |
| 13:30–13:50 | Lijian Jiang  | Mixed multiscale finite element methods on adaptive unstructured grids using limited global information               |
| 13:55–14:15 | Xianjin Chen  | A framework for computing multiple saddle points to strongly indefinite functionals                                   |
| 14:20–14:40 | Zhijun Qiao   | $r$ -matrix structures of integrable systems  |
| 14:45–15:05 | Dambaru Bhatta  | Computation of the second order dynamic force component on a vertical cylinder due to wave diffraction                |
| 15:10–15:30 | Baofeng Feng <sup>†</sup> & Kenichi Maruno              | A short pulse equation: loop, breather solitons and integrable semi-discretization                                    |
| 15:35–15:55 | Fengxin Chen  | Traveling waves for system of nonlocal evolution equations with bistable nonlinearity                                 |
| 16:00–16:20 | Yan Li  | An accurate multiphase upscaling for flow and transport in heterogeneous porous media                                 |
| 16:25–16:45 | Katarina Jegdic   | Remarks on strong regular reflection for the isentropic gas dynamics equations  |
| 16:50–17:10 | Nguyen Mau Nam  | Generalized differentiation of nonsmooth functions & applications to Hamilton-Jacobi equations in infinite dimensions |
| 17:15–17:35 | Zhongxiao Li  | The structure of student dialogue in web-assisted mathematics courses   |
| 17:40–18:00 | Edwin Tecarro <sup>†</sup> & Akif Uzman & Jeong-Mi Yoon | A model of signaling pathways in embryonic <i>Xenopus laevis</i>  |
| 18:05–18:25 | Youn-Sha Chan   | Advanced Material Modeling  |
| 19:00–20:00 | <b>Dinner Party</b>                                     |   |

<sup>†</sup> Speaker.