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**Dr. Worawat Meevasana อ.ดร. วรรัตน์ มีวานา**

## Curriculum Vitae

### Current address

School of Physics  
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### Education

- **Stanford University**, Stanford, CA, USA  
Research Advisor: Prof. Z.-X Shen, zxshen@stanford.edu  
Ph.D. in Physics: Dec 2008
- **Stanford University**, Stanford, CA, USA  
Research Advisor: Prof. Z.-X Shen, zxshen@stanford.edu  
M.Sc. in Physics, August 2007
- **University of California, Santa Barbara (UCSB)**, CA, USA (Highest honor)  
Research Advisor: Prof. Guenter Ahlers, guenter@physics.ucsb.edu  
B.Sc. in Physics, June 2002

### Postdoctoral experience

**University of St Andrews**, St Andrews, UK, March 2009- Sept 2010  
Research Supervisor: Assoc. Prof. Felix Baumberger, fb40@st-andrews.ac.uk  
- Developing Laser-based Angle-resolved photoemission spectroscopy

### Research interest

#### **2009 – Present:**

- Angle-resolved photoemission studies
- Bulk and surface electronic structure of transition metal oxides: SrTiO<sub>3</sub>, KTaO<sub>3</sub>, ZnO
- Photoemission study of diamondoid

#### **2003 – 2008**

- Angle-resolved photoemission studies of the doping-dependent effects in the single-layer high-Tc superconductors, Bi<sub>2</sub>Sr<sub>2</sub>CuO<sub>6</sub>, and HgBa<sub>2</sub>Cu<sub>2</sub>O<sub>4</sub>
- Angle-resolved photoemission studies of other cuprate superconductors and ruthenate (Ca<sub>2-x</sub>Na<sub>x</sub>CuO<sub>2</sub>Cl<sub>2</sub>, Sr<sub>2</sub>RuO<sub>4</sub>)

#### **2000 – 2002:**

- Study of Rayleigh-Bénard convection (a pattern-forming nonlinear system), emphasizing on ring convective patterns in an elliptical boundary

## **Awards**

- 2009: - Outstanding PhD Thesis Award by National Research Council Of Thailand, Thailand  
2008: - Thai Scholar Innovation Program award by Office of Educational Affairs, USA  
2002: - Graduated with the Outstanding Senior Award and highest academic honors, UCSB  
2001: - Summer 2001 Research Internships in Science and Engineering award (RISE), UCSB  
2000: - CCS Summer Undergraduate Research Fellowships award (SURF), UCSB  
1999: - 1<sup>st</sup> place local winner at UCSB and 17<sup>th</sup> place nationwide on 1999 BAUPC.  
1997: - Thai Scholarship for study in the field of Physics through Ph. D. in the U.S.  
- A Thai representative for 28<sup>th</sup> International Physics Olympiad (IPhO), Sudbury, Canada.

## **Selected publications** (from total 30 publications)

- **Meevasana W.**, King P.D.C., He R.H., Mo S.-K., Hashimoto M., Tamai A., Songsiriritthigul P., Baumberger F., Shen Z.-X., Creation and control of a two-dimensional electron liquid at the bare SrTiO<sub>3</sub> surface , Nature Materials , 10 ; 114 (2011). (impact factor = 29.5)
- King P.D.C., Rosen J.A., **Meevasana W.**, Tamai A., Rozbicki E., Comin R., Levy G., Fournier D., Yoshida Y., Eisaki H., Shen K.M., Ingle N.J.C., Damascelli A., Baumberger F. , Structural origin of apparent Fermi surface pockets in angle-resolved photoemission of Bi<sub>2</sub>Sr<sub>2-x</sub>La<sub>x</sub>CuO<sub>6</sub> , Physical Review Letters , 106 ; 127005 (2011) (impact factor = 7.3)
- He R.-H., Hashimoto M., Karapetyan H., Koralek J.D., Hinton J.P., Testaud J.P., Nathan V., Yoshida Y., Yao H., Tanaka K., **Meevasana W.**, Moore R.G., Lu D.H., Mo S.-K., Ishikado M., Eisaki H., Hussain Z., Devereaux T.P., Kivelson S.A., Orenstein J., Kapitulnik A., Shen Z.-X. , From a single-band metal to a high-temperature superconductor via two thermal phase transitions , Science , 331 ; 1579 (2011). (impact factor = 29.7)
- **Meevasana W.**, Zhou X.J., Moritz B., Chen C.-C., He R.H., Fujimori S.-I., Lu D.H., Mo S.-K., Moore R.G., Baumberger F., Devereaux T.P., Van Der Marel D., Nagaosa N., Zaanen J., Shen Z.-X., Strong energy-momentum dispersion of phonon-dressed carriers in the lightly doped band insulator SrTiO<sub>3</sub> , New Journal of Physics , 12 ; 23004 (2010). (impact factor = 3.3)
- Hashimoto M., He R.-H., Tanaka K., Testaud J.-P., **Meevasana W.**, Moore R.G., Lu D., Yao H., Yoshida Y., Eisaki H., Devereaux T.P., Hussain Z., Shen Z.-X., Particle-hole symmetry breaking in the pseudogap state of Bi2201 , Nature Physics , 6 ; 414 (2010). (impact factor = 15.5)
- **Meevasana W.**, Supruangnet R., Nakajima H., Topon O., Amornkitbamrung V., Songsiriritthigul P. , Electron affinity study of adamantine on Si(1 1 1) , Applied Surface Science , 256 ; 934 (2009). (impact factor = 1.6)
- **Meevasana W.**, N.J.C. Ingle, D.H. Lu, J.R. Shi, F. Baumberger, K.M. Shen, W.S. Lee, T. Cuk, H. Eisaki, T.P. Devereaux, N. Nagaosa, J. Zaanen, and Z.-X. Shen, "Doping dependence of the coupling of electrons to bosonic modes in the single-layer high-temperature Bi<sub>2</sub>Sr<sub>2</sub>CuO<sub>6</sub> superconductor", Physical Review Letters, 96; 157003 (2006) (impact factor = 7.3)
- **Meevasana W.**, T.P. Devereaux, N. Nagaosa, Z.-X. Shen, and J. Zaanen, "Calculation of overdamped c-axis charge dynamics and the coupling to polar phonons in cuprate superconductors", Physical Review B, 74; 174524 (2006). (impact factor = 3.4)