

LEI MA

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BASIC

Name: Lei Ma
Sex: Male

Birthday: 29/08/1988
Birthplace: Shandong, China

Nationality: China
Marital Status: Single

EDUCATION

Shandong University, Jinan, China
Bachelor of Science, Physics, June 2010.
National Science Talents Training Base in Physics.
G.P.A. 90.89(3.81)/100(4.0) ("A+", A, A-, B+, B, B-, C+, C, C-, D, F" system)

EXPERIENCE

Research Team Leader Shandong University July 2007 - May 2008
Jinan, China

Leader of a research program in search of a new kind of high temperature green piezoelectric ceramics based on $\text{NaBi}_5\text{Ti}_5\text{O}_{18}$.
Under supervision of Prof. Minglei Zhao.

Research Team Member Shandong University July 2008 - May 2005
Jinan, China

Member of research program on the structure and piezoelectric property of $\text{Bi}_4\text{Ti}_3\text{O}_{12}\text{-Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3\text{-BiFeO}_3$ system.
Under supervision of Prof. Minglei Zhao.

Secretary of AAA SDU Shandong University September 2006 - July 2007
Jinan, China

Joined the Amateur Astronomers Association of Shandong University (AAA SDU) and promoted to secretary of Theory Department.
Duties included theoretical astronomy research and popular science, instrument keeping and assembling.
Successfully help carrying out popular science activities and observations.

Leader of TD AAA SDU Shandong University July 2007 - July 2008
Jinan, China

Promoted to leader of Theory Department (TD), Amateur Astronomers Association of Shandong University (AAA SDU).
Re-established our website in collaboration with Jixia Lee. Organized several observations. Gave several lectures about astronomy to newbies.

Other Activities

FPD Summer Camp Weihai Campus, Shandong University Summers 2007
Weihai, China

FPD summer camp is a training base for students' creativity.

Optical Research Shandong University December 2007
Jinan, China

Spontaneous and self-organized research on Malus law in optics.
Successfully published a paper on an easy test of Malus law.

May-4th Academic Contest Shandong University September 2008
Jinan, China

May-4th Academic Contest is a research paper contest for undergraduate student in Shandong University.
Two paper submitted and Won the first prize and third prize respectively and invited to give a talk on our research.

CPS 2008 Shandong University September 2008
Jinan, China

Chinese Physical Society annual meeting is the largest physics meeting in China.
Attended the lectures and worked as volunteers.

PUBLICATIONS

Lei Ma, Kun Zhao, Jixia Li, Qi Wu, Minglei Zhao, Chunlei Wang, *Dielectric and Piezoelectric Properties of (Li,Ce) Modified NaBi5Ti5O18 Composite Ceramics*, *Journal of Rare Earths* **27**, 496 (2009).

Lei Ma, Kun Zhao, Jixia Li and Hongze Zhang, *The Modification of Malus Law for Depolarized Polaroid and Experimental Verification*, *College Physics* **29**, 58 (2010).

SKILLS

Theoretical Physics

Cosmology: Harmonic model, several dark energy models, matter power spectrum, supernova data fitting.

Gravity Theory: General relativity, f(R) theory, "disformal" gravity.

Computer & Web

National Computer Rank Examination Certificate Grade 3 out of 4.

Programming Languages: C (Good), Python (primary); LaTeX, Markdown; HTML & CSS.

Systems & Software: Linux (Ubuntu), Windows; **Mathematica**; Photoshop, AutoCAD; Wordpress, Drupal; Github.

Languages & Science Fiction

Chinese: Native. Grade 2 Level A in Mandarin Proficiency Test.

English: TOEFL IBT 87; TA of Professor Cahill from US.

SF: Keen on science fiction stories, have interest in realization of warp drive.

HONORS AND AWARDS

Scholarship

First Prize of Excellent Undergraduate Scholarship, 2007
Third Prize of Excellent Undergraduate Scholarship, 2008
Second Prize of Excellent Undergraduate Scholarship, 2009
Individual Scholarship, 2009

Awards

First Prize of May·4th Academic Contest, 2008
Third Prize of May·4th Academic Contest, 2008
Second Prize of Innovation in Science and Technology for College Students of Shandong Province in China, 2009

EXTRACURRICULAR ACTIVITIES

Built a website for astro-ph notes, q&a and lectures. (<http://iastro.lamost.org>)
Built website for popular astronomy (in Chinese). (<http://multiverse.lamost.org>)
Github fan. (<http://github.com/emptymalei>, <http://github.com/CosmologyTaskForce>)
Wrote Mathematica programs for **cosmological perturbation symbol calculations and simple data fitting**.(CoMaPack and CoChiSquare on github.)
Established **Cosmological Surveys** repository to summarize information of the surveys and **Modi-GraviDoc** repository to record my calculation details of the modified gravity theories.(On github.)