

Curriculum Vitae

Chao-Te Li

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Education

- Ph.D. 1993-1999, Physics, University of Virginia
Sub-millimeter-wave mixing using high T_c superconductor hot
electron bolometers
- B.S. 1986-1990, Electrophysics, National Chiao-Tung University

Experience

- 2015 – Senior Research Engineer
2007 – 2015 Associate Research Engineer
2005 – 2007 Assistant Research Engineer
2002 – 2005 Postdoctoral Fellow
Institute of Astronomy & Astrophysics, Academia Sinica
- 2000 – 2002 Senior Electronic Engineer
Kai-Link Corporation
- 1999 – 2000 Project Engineer
Hyton Technology Corporation

Fields of specialty

- Superconducting detectors and receivers
- Backend signal processing for radio telescopes

Ongoing activities

- SPICA Warm Front End Electronics (WFEE) development – TES/SQUID thermal and magnetic field control
- wSMA diplexer design and testing
- EHT 330 GHz receiver development – SIS mixer block design, cartridge optics revision
- YTLA commission – cross talk (or coherence) problem solved

Publications

Chao-Te Li et al.

“Metal mesh IR filter for wSMA,” SPIE Astronomical Telescopes + Instrumentation (2020) submitted

Chao-Te Li et al.

“TIME millimeter wave grating spectrometer,” SPIE Astronomical Telescopes + Instrumentation (2018)

Chih-Chiang Han et al.

“The first-light receivers for the Greenland Telescope,” SPIE Astronomical Telescopes + Instrumentation (2018)

Kai-Yang Lin et al.

“AMiBA: Cluster Sunyaev–Zel’dovich Effect Observations with the Expanded 13-Element Array,” ApJ, Vol. 830 (2016)

Chao-Te Li, Jen-Chieh Cheng, Derek Kubo, John Kuroda, Kim Guzzino, Ming-Tang Chen

“Digital sideband separating down-conversion for Yuan-Tseh Lee Array,” SPIE Astronomical Telescopes + Instrumentation (2016)

Jonathon Hunacek et al.

“Detector Modules and Spectrometers for the TIME-Pilot [CII] Intensity Mapping Experiment,” SPIE Astronomical Telescopes + Instrumentation (2016)

Chao-Te Li, Tashun Wei, Jen-Chieh Cheng, Corwin Shiu, A. T. Crites, C. M. Bradford

“Development of a millimeter wave grating spectrometer for TIME Pilot,” The 27th International Symposium on Space Terahertz Technology (2016)

Kuan-Yu Liu, Tse-Jun Chen, Yen-Pin Chang, Chao-Te Li, Sheng-Cai Shi, Ming-Jye Wang

“The Performance of an Integrated Dual Polarization SIS Mixer at 350 GHz,” The 26th International Symposium on Space Terahertz Technology (2015)

A. T. Grites et al.

“The TIME-Pilot Intensity Mapping Experiment,” Proceedings of SPIE Astronomical Telescopes and Instrumentation (2014)

Homin Jiang et al.

“A 5 Giga samples per second 8-Bit Analog to Digital Printed Circuit Board for Radio Astronomy,” PASP, vol. 126, no. 942, Aug., pp. 761-768, 2014

Kuan-Yu Liu, Ming-Jye Wang, Chao-Te Li et al.

“Development of a Dual Polarization SIS Mixer with a Planar Orthomode Transducer at 350 GHz,” IEEE Trans. Applied Superconductivity, Vol. 23, Issue 3, 2013

Yun-Chih Chou, Chao-Te Li, Ming-Tang Chen

“Multi-Pixel Optics Design for the Submillimeter Array,” Proceedings of the 24th

- International Symposium on Space Terahertz Technology (2013)
- Chao-Te Li, Kuan-Yu Liu, Wei-Chun Lu et al.
"Development of 460 GHz and Dual Polarization SIS Mixers for the Submillimeter Array," IEEE Trans. Applied Superconductivity, Vol. 21, Issue 3, pp. 654-659, 2011
- Chao-Te Li, D. Y. Kubo, W. E. Wilson et al.
"AMiBA Wideband Analog Correlator," ApJ, Vol. 716, Issue 1, pp. 746-757 (2010)
- Ming-Tang Chen, Chao-Te Li, Yuh-Jing Hwang et al.
"AMiBA: Broadband Heterodyne Cosmic Microwave Background Interferometry," ApJ, Vol. 694, Issue 2, pp. 1664-1669 (2009)
- Kai-Yang Lin, Chao-Te Li, Paul T. P. Ho et al.
"AMiBA: System Performance," ApJ, Vol. 694, Issue 2, pp. 1629-1636 (2009)
- Paul T. P. Ho et al.
"The Yuan-Tseh Lee Array for Microwave Background Anisotropy," ApJ, Vol. 694, Issue 2, pp. 1610-1618 (2009)
- Chao-Te Li et al.
"Development of SIS Mixers for SMA 400-520 GHz Band," Proceedings of the 20th International Symposium on Space Terahertz Technology (2009)
- Chao-Te Li et al.
"Design of SIS Mixers for SMA 400 - 520 GHz Band," Proceedings of the Global Symposium on Millimeter Waves, 2008
- Chao-Te Li et al.
"A wideband analog correlator system for AMiBA," Proceedings of SPIE Astronomical Telescopes and Instrumentation (2004)
- C.-T. Li, B. S. Deaver, R. M. Weikle, Mark Lee, R. A. Rao, and C. B. Eom
"Gain-Bandwidth and Noise Characteristics of Millimeter-wave YBa₂Cu₃O₇ Hot-electron Bolometer Mixers," Appl. Phys. Lett. 73, 1727 (1998)
- Mark Lee, Chao-Te Li, B. S. Deaver Jr., R. M. Weikle
"Nonlinear THz Mixing in YBaCuO Thin Film Hot Electron Bolometer," Proceedings of SPIE Superconducting and Related Oxides: Physics and Nanoengineering III (1998)
- Chao-Te Li et al.
"Gain-bandwidth characteristics of high-T_c superconducting millimeter-wave hot-electron bolometer mixers," Proceedings of the 9th International Symposium on Space Terahertz Technology (1998)
- C. -T. Li, B. S. Deaver, Mark Lee, R. M. Weikle, R. A. Rao, C. B. Eom
"Low power submillimeter-wave mixing and responsivity properties of YBa₂Cu₃O₇ hot-electron bolometers," Appl. Phys. Lett. 71, 1560 (1997)