Photographs and Curriculum Vita of Invitees to 2nd Invitational High-Frequency Gravitational Wave Workshop
September 17-20, 2007, Institute for Advanced Studies at Austin, Texas

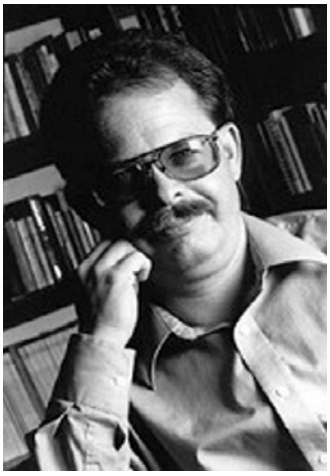
Robert M L Baker, Jr.
Honorary Chairman of the Workshop

Robert M L Baker Jr., was born in Los Angeles on September 1, 1930. He has been married to his wife Bonnie since 1964 and has three grown children. Baker earned a bachelor's degree in Physics at UCLA with highest honors (*summa cum laude* – first in his class) was elected to *Phi Beta Kappa*, earned a master's degree in Physics and a Ph.D. in Engineering at UCLA-- the Ph.D. degree with a specialization in aerospace was, according to UCLA officials, the first of its kind to be granted in the United States. Dr. Baker was on the faculty of the Department of Astronomy at UCLA from 1959 to 1963 and the Department of Engineering and Applied Science at UCLA from 1963 to 1971 as a Lecturer and Assistant Professor. During that time he was a Lecturer at the *United States Air Force Academy.* While on a two-year tour of active duty in the Air Force he worked on a variety of classified aerospace projects. He was the head of the Lockheed's *Astrodynamics Research Center* in Bel Air, California and in 1964 joined *Computer Sciences Corporation* as the Associate Manager for Mathematical Analysis. In 1980 he was elected President of *West Coast University*, an accredited university for the adult learner now operating under the auspices of *American Career College* in Los Angeles. After retiring from West Coast University in 1997 as President and Professor of Engineering, Dr. Baker became the Senior Consultant for *Transportation Sciences Corporation* and *GRAVWAVE© LLC*. He won the UCLA *Physics Prize*, was recipient of the *Dirk Brouwer Award* for outstanding contributions in astrodynamics and orbital mechanics, and was a recipient of the *Outstanding Man of the Year* Junior Chamber of Commerce award in 1965 presented to him by Ronald Reagan. He is a *fellow* of the *American Association for the Advancement of Science.* He was national chairman of the Astrodynamics Technical Committee of the *American Institute of Aeronautics and Astronautics* (AIAA) from 1961 to 1964, was Editor of the *Journal of the Astronautical Sciences* from 1963 to 1975, was appointed by William Bennett to the *National Advisory Committee on Accreditation and Institutional Eligibility* of the Department of Education

from 1987 to 1989, was appointed to the *Academic Review Committee on Gravitational Research* with the U. S. Army from 2001 to 2003, Head of Committee on High-Frequency Gravitational Waves of the *Oakland Institute for Gravitational Wave Research* 2002-, Vice Chairperson of the first International HFGW Conference at the MITRE Corporation in 2003, Honorary Chairman of the 2007 2nd HFGW Workshop, Advisory Professor *Chongqing University*, China 2004, and was the author of several textbooks and over one hundred company reports, symposium papers, and journal articles in the area of astrodynamics, celestial mechanics, and High-Frequency Gravitational Waves (HFGWs) including *An Introduction to Astrodynamics* (1960) with Maud W. Makemson and *Astrodynamics: Applications and Advanced Topics* (1969). Dr. Baker has been Project Manager on three prototype development, fabrication, and test projects under contract to the U. S. Navy and Principal Investigator on several NASA and USAF projects while head of Lockheed's *Astrodynamic Research Center*. As President of *West Coast University* Dr. Baker coordinated the activities of six groups of scientists and engineers spread throughout Southern California. Dr. Baker has been interested in the dynamics of gravitational fields since the 1950's and gravitational-wave research since the early 1960's. He holds six patents and 14 pending patents in the United States, Europe, Russia, and China in the area of gravitational-wave generation and detection in the laboratory. www.drrobertbaker.com.

Eric W. Davis

Co-chairman of the Workshop



Dr. Davis received his Ph.D. in astrophysics from the University of Arizona in 1991. His specialization and research interests include breakthrough propulsion physics, the search for extraterrestrial intelligence, spacecraft exploration of the outer solar system, quantum field theory, general relativity theory and cosmology, and space mission engineering. Dr. Davis is a research physicist at the Institute for Advanced Studies at Austin, and is also the CEO of Warp Drive Metrics. Dr. Davis is also a consultant or contractor to the Air Force Research Laboratory-Propulsion Directorate/Propellants

Branch, the Department of Energy, and the NASA Breakthrough Propulsion Physics program. Dr. Davis began his graduate work in 1984 as a mission support and research assistant with the Infrared Astronomical Satellite group at the Steward Observatory in Tucson, Arizona. In 1985, he joined the Voyager Ultraviolet Spectrometer Experiment group at the Lunar & Planetary Lab in Tucson where he conducted research on Jupiter's magnetosphere, the Uranus and Neptune planetary encounters, and participated in the Voyager 1 & 2 space missions. Dr. Davis has authored papers on the quantum vacuum zero-point energy, traversable wormholes, warp drives, laser propulsion, teleportation physics, advanced propulsion, concepts, future military weapons, and contact with extraterrestrial visitors. He has been recognized by the American Institute of Aeronautics and Astronautics for outstanding contributions to national defense and space public policy, and received recognition from the State of Arizona Economic Conversion Council for contributions to commercial conversion of small-medium space and defense businesses in Arizona. Dr. Davis is a Fellow of the British Interplanetary Society, Associate Fellow of the American Institute of Aeronautics & Astronautics, and member of the American Astronomical Society. He serves as a member of the STAIF Symposium on New Frontiers & Future Flight technical committee and the Aerospace Technology Working Group. In 2003 he contributed a paper on generating gravitons for rocket propulsion to the High-Frequency Gravitational Waves Conference in McLean, VA. www.earthtech.org/principals/davisbio.htm.

Zhenyun Fang

Zhenyun Fang was born in Anhui China on May 4, 1945, graduate from Sichuan University in 1967 in Physics, received master's degree in Physics in 1982 at Chongqing University. From 1983 to 1987 performed graduate studies at the Unversite Catholique de Louvain (UCL) in Belgium, and earned the PhD in Physics in 1987. From 1987 to 1990, was on the faculty of Department of Physics at Chongqing University (CQU) as an Associate Professor and Professor. From 1991, once as the Dean of the Graduate School,

Assistant President of CQU. Currently, has been the Director of Institute of Theoretical Physics of CQU, Managing Director of High Energy Society of China, and has been interested in theoretical Physics, especially, in the research associate with the particle physics and related issues such as QED QCD SM (Standard Model) and beyond of electro-weak gauge-interaction, and high frequency gravitational-wave research, etc. for several decades.

Giorgio Fontana

Giorgio Fontana was born in Trento, Italy on June 11, 1957. He received his doctorate with a specialization in electronics at the *University of Padua* in Italy. In 1984 Dr. Fontana became the Head of the Electronics Laboratory of the Department of Physics of the *University of Trento*. In 1995 he became the head of the computer center of the Faculty of Science (physics and mathematics) of the *University of Trento* and in 2000 he was advanced to the Head of the Electronics Laboratory of the Department of Information and Communication Technology at the *University of Trento*. Dr. Fontana has developed scientific instrumentation in the field of laser measurement and characterization of materials, ion transport and analysis, superconductors and related devices, cryogenic semiconductor electronics, optics, gravitational-wave Weber bar detectors and computer systems. Recently he has been involved in the development of technologies for atomic time transfer and synchronization, high speed data switching and fiber optic amplifiers and sensors. Dr. Fontana is interested in the development of new technologies for space travel with gravitational waves and is involved in the development of a suitable theoretical/engineering model for FTL travel through the Hyperspace. Currently he instructs in computer simulation and electronic circuit courses at the *University of Trento.* Dr. Fontana is a member of the *Istituto Nazionale di Fisica Nucleare (INFN).* He has authored well over a dozen scientific papers related to High-Frequency Gravitational Waves (HFGW) in internationally recognized technical journals. www.ing.unitn.it/~fontana.

Leonid P. Grishchuk

Leonid P. Grishchuk received his Ph.D. in Physics at Moscow University in 1967 with a thesis on "The general solution of Einstein's equations with a physical singularity," and a Doctor of Science degree in 1977 with a dissertation on "Gravitational waves, their physical properties and astronomical manifestations." Since 1967 he has been employed by the Sternberg Astronomical Institute of Moscow University (in effect, the University's Department of Astronomy), consecutively as a Junior Researcher, Senior Researcher, Leading Researcher and since 1988 as Head of the Relativistic Astrophysics Department. Dr. Grishchuk is also a full professor at Moscow University. Since 1995 he is a Distinguished Research Professor at Cardiff University, United Kingdom. In the mid 1960s he proved that the general solution of the Einstein equations for dust-like matter (that is, the solution with generic initial data including rotation) evolves a physical singularity in which the matter density and curvature go to infinity. He showed further that the singularity is a caustic time-like hyper-surface (a "naked" singularity in current terminology) in the vicinity of which a matter fluid element increases its density by developing a flattened ("pancake") form. This theorem was the first constructive disproof of the claimed result that the general solution to the Einstein equations, with matter or without matter, cannot have a physical singularity. It also demonstrated that the "pancake"-like formations are an inevitable and stable feature of the matter motion in the post-recombination era of our Universe, which is important today for theories of galaxy formation. In the 1970s and 80s, Dr. Grishchuk's research and review papers on the physical properties of gravitational radiation, on sources of gravitational waves, and on the waves' interaction with matter, fields and quantum systems played an influential role in the physics community's recognition of the great importance and timeliness of theoretical and experimental studies of gravitational waves. Especially influential was his discovery (1974) that the (relic) gravitational waves should necessarily be generated in the very early Universe. He demonstrated (partially with Yu. V. Sidorov) that the quantum-mechanically generated cosmological perturbations should now be in squeezed quantum states, which leads to the phenomena of standing waves and modulated power

spectra - the subject of current observational studies. Dr. Grishchuk's work in 1970s on the interaction between gravitational and electromagnetic waves laid the foundation for the theory of so-called electromagnetically-coupled detectors of gravitational waves (of which laser interferometer detectors are one variant, and microwave cavity detectors another). In the 70's and 80's he discovered new physical effects that should be induced by gravitational waves, such as the drift of particles, the kinematic resonance, the 'magnetic' force, the memory of position (with V.B Braginsky), and the memory of velocity (with A.G Polnarev). He showed (with M.V Sazhin) that by preparing an oscillatory detector (e.g. a resonant bar) in a squeezed quantum state, an experimenter can enhance its sensitivity to gravitational waves, until thermal noise degrades the prepared state. In the 90's he has developed the quantum theory of resonant bar gravitational wave detectors. He derived (with S.M Kopeikin) the relativistic equations of motion for compact bodies, such as neutron stars and black holes, including the leading gravitational wave radiation reaction terms. He developed (with A.N Petrov) the field-theoretical formulation of general relativity. He showed (with Ya.B Zeldovich) that observational data on the quadrupole component of the cosmic microwave background radiation (CMB) place severe limits on possible inhomogeneity and anisotropy of the Universe at scales several hundred times larger than the Hubble radius (the Grishchuk-Zeldovich effect). He proved (with V.A Belinsky, I.M Khalatnikov and Ya.B Zeldovich) that the inflationary trajectories are attractors in the phase space of the dynamical system that includes gravity and scalar fields. Dr. Grishchuk's more recent result on the subject of cosmology (1994) states that the contribution of the quantum-mechanically generated gravitational waves to the large-angular-scale anisotropy in the CMB radiation dominates the contributions of density and/or rotational perturbations. This result is of a great importance for the interpretation of the CMB observations and current efforts to detect relic gravitational waves. Dr. Grishchuk has authored major articles, "Gravitation" and "Cosmology", for the Soviet Encyclopedia "Physics of the Cosmos". These articles are extensively used as course material throughout the former Soviet Union. He has written 3 pedagogical articles (two of them with Ya. B. Zeldovich) for the review journal Physics-Uspekhi, explaining the role and significance of general relativity in modern science and refuting in detail claims that general relativity is mathematically and physically self-inconsistent! . Grishchuk has participated in educational programs on radio and TV, both in Russia and America. He contributed to formulating the scientific content and took part in the recently released TV film ``Waves of the Future", which was part of PBS's "The Astronomers" series (and which was nominated for an Emmy Award). www.astro.cardiff.ac.uk/pub/Leonid.Grishchuk.

Pankaj S. Joshi

Pankaj S. Joshi is a professor, Department of Astronomy and Astrophysics, at the *Tata Institute of Fundamental Research* in Bombay, India. He received his Master of Science degree in 1975 and his Ph D in 1979. He has undertaken several important foreign assignments, including the *National Science Foundation* research position at the *University of Pittsburgh*, Visiting Scientist at *Cambridge University*, in England (September and October 1983), Visiting Scientist at the Faculty of Mathematical Studies of the *University of Southampton*, England. etc. He has been a Visiting Professor at many foreign and Indian universities, delivering courses of lectures and conducting research, including at Department of Theoretical Physics, *University of Basque Country*, Spain (September and October 1998) and Faculty of Math. Sciences, *University of Natal*, South Africa (February and March, 1999). Dr. Joshi has been invited as a Visiting Professor by the *University of Cincinnati* to offer a course of lectures on "Gravitational Collapse in General Relativity." He received the Prize and Award by the *Gravity Research Foundation*, for research work on the "Final Fate of Gravitational Collapse" (1991). The other winners in that year included M. Turner of NASA/Fermi Lab, S. Coleman (Harvard), L .Krauss (Yale), J. Preskill (Caltech), and F. Wilczek (Princeton). He was awarded a *Nuffield Foundation Fellowship* to work at the DAMTP, *Cambridge University* (1981). Dr. Joshi was also the *National Merit Scholarship* holder of India (1969-73) and University First in Master of Science examinations. He is a Member of the National Advisory Committee to the University Grants Commission, India, for the subjects of Gravitation and Cosmology (1992-1994); Member, *Advisory Committee on Gravitation and Cosmology*, IUCAA (1994-); Served as Member on Organizing Committees for many conferences, including the "Physics of Black holes" (Bangalore, 1997). His main work has focused on gravitation and cosmology. His recent work has been to intensively analyze gravitational collapse of massive stars. This is of key importance in relativistic astrophysics today and lies at the foundation of the black hole physics. Dr. Joshi has shown, for example, that both black holes and naked singularities develop as the outcome of collapse taking place when a massive star dies on exhausting its nuclear fuel. This can have important implications such as massive bursts of radiation given out when a star dies. Dr Joshi has authored two books: *Global aspects in*

gravitation and cosmology (1993) published by the Clarendon Press, Oxford, and *Singularities, black holes and cosmic censorship,* Proceedings of the Raychaudhuri Session at the *International Conference on Gravitation and Cosmology,* IUCAA Publication, (1996) and more than 90 scientific papers.

Biao Li

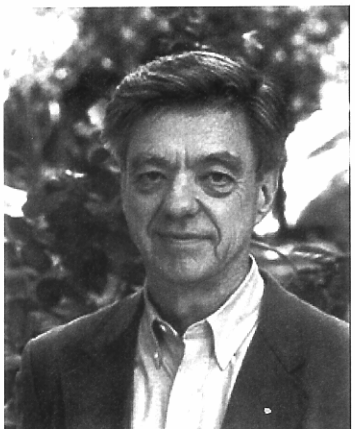
Deputy Professor Biao Li is the Chief of the Microwave Antenna Division of the Institute of Electronic Engineering of the Chinese Academy of Engineering Physics. He received a Bachelor's degree in Geophysics from *East China polytechnics University* in 1988 and a Master degree in electro-magnetic field theory and microwave technology from *University of Electronic Science and Technology of China* in 1994. Biao Li's current interests include on-board antenna, meta-materials, and digital beam forming. As an original member of the Chinese High-Frequency Gravitational Wave (HFGW) detector team, led by Professor Chuanming Zhou, Professor Li is designing the Gaussian beam scheme needed for HFGW detection and at the same time he is investigating the feasibility of the fabrication of the entire HFGW detection apparatus

Fangyu Li

Fangyu Li was born on October 28, 1943. He was a student in the department of Physics at Northwestern Normal University, China from 1961 to 1965. From 1978 to 1990 he was a Lecturer. Associate Professor in the Department of Physics at *Chongqing University*, China and from 1990 to 1991 he was a visiting Scientist at the Gravitational Laboratory of the Sternberg State Astronomical Institute of the Moscow University in Russia. He was an Associate Professor, Department of Physics, *Chongqing University* from 1991 to 1994, was appointed Head of the Physics Department of *Chongqing University* from 1996 to 1998, and was appointed Dean of the college of Science at *Chongqing University* during the period 1998 to 2000. From 1994 to date, he has been a professor of Physics and Doctorate Tutor at the University. Now he is a member of the Council of the Chinese Physics Society, a member of the Council of the Chinese Gravitational and Relativity Astrophysical Society, a member of the World Laboratory, Chairman of *Chongqing Physics Society*, China and Head of the *Gravitational Physics Institute of Chongqing University*. His research fields include General Relativity and gravitation, classical and quantum electrodynamics in curved spacetime, theories of gravitational waves and gravitational radiation, positive definite problems of energy-momentum tensor of gravitational field, exact and approximate wave solutions of the Einstein field equations, gravitational perturbation effect in topological phonon space, interaction of gravitational waves with electromagnetic fields, and detection of high-frequency gravitational waves. Dr. Li has published more than sixty papers concerning gravitational waves in internationally recognized scientific journals and authored a paper at the first International HFGW Conference and Workshop at The MITRE Corporation in 2003.

H. E. Puthoff

Co-chairman of the Workshop



Hal Puthoff is Director of the *Institute for Advanced Studies at Austin (IASA)*. A graduate of Stanford University in 1967, Dr. Puthoff's professional background spans more than four decades of research at General Electric, Sperry, Stanford University, SRI International, and, since 1985, as Director of IASA. His present research interests range from theoretical studies concerning gravitation, inertia, cosmology and energy research, to laboratory studies of innovative approaches to energy generation and space propulsion. He has published over 60 papers on electron-beam devices, lasers and quantum vacuum energy effects, has patents issued in the laser, communications, and energy fields, and is co-author of a textbook Fundamentals of Quantum Electronics (Wiley, 1969), published in English, French and Russian. Puthoff is a member and officer of several professional organizations, and regularly serves various corporations and foundations as consultant on leading-edge technologies and future technology trends. http://en.wikipedia.org/wiki/Harold_E._Puthoff.

Valentin N. Rudenko

Professor, Doctor of Science (physics), Sternberg Astronomical Institute of Moscow State University (MSU). Head of Gravitational Measurement Division of Sternberg Astronomical Institute of MSU; Full Professor of Chair of Astrophysics of Physics Department, MSU. More than two hundred papers in Russian and international physical journals, including: *JETP*, *Uspechy, Phys. Reports, Phys.Lett., Nuovo Cimento, Foundation of Phys.* etc. One monograph: "Gravitational waves in GR and the problem of its detection" 1987 ed. Moscow University, 270 pp, (in Russian}. Presented a paper at the first HFGW Workshop, The MITRE Corporation, 2003.

Researching fields:
- Gravitational theory
- Gravitational-wave experiments
- Gravitational measurements.
- Theory and methods of precise measurements
- General radio physics and laser physics.
- Astrophysics.

Member of Scientific Councils:
Main SC of Sternberg Astron. Inst.,
Joint SC of Moscow University,
SC of State Program "High Energy Physics"
Member of Editorial Board of journal
"Gravitational and Cosmology"
ed. Russian Grav. Society.

Honored Professor of Chongqing University, P.R. China (1993)

Gary V. Stephenson

Gary Stephenson received his B. S. Degree in Physics at Montana State University in 1983 and from 1984 to 2000 performed graduate studies at the University of California, Purdue University and the University of Washington in Physics and Electrical Engineering. He is a member of Sigma Pi Sigma, a physics honorary, and is a past member of SPIE and AIAA. From 1983 to 1986 he was a Member of the Technical Staff at Hughes Aircraft Company where as a systems engineer he worked on optical and radar systems. In 1986 Mr. Stephenson joined the Aerospace Optical Division of ITT where he performed research, development, and systems design studies of space borne meteorological infrared instruments. In 1989 through 1997 he returned to Hughes as a Systems Engineer where he was responsible for the electro-optical systems engineering and on-site support of AST, an airborne infrared tracking sensor for the U. S. Army, and prepared a number of proposals, including technical volumes for early phases of EAGLE (Extended Airborne Global Launch Evaluator), mobile THEL (Tactical High Energy Laser), and NPOESS (National Polar-orbiting Operational Environmental Satellite System). From 1997 to the current date he has been a Systems Engineer at The Boeing Company where he has again been involved in the systems design of electromagnetic mission equipment and systems. Stephenson is an expert on the Gertsenshtein effect (utilized for both generation and detection of HFGWs) and has published several papers in that area. Since 1989 he has also been the president and chief investigator for Seculine Consulting. Mr. Stephenson has publications in a variety of applications areas, seven patents, participated in the first International HFGW Conference at the MITRE Corporation in 2003, and has publications in the communications applications of high-frequency gravitational waves.

Roger Clive Woods

M.A., D.Phil., D.Sc. (Oxford), FIET

Dr. Woods was born in Leicester, England, and is now Department Chairman and Voorhies Distinguished Professor in the Department of Electrical and Computer Engineering at Louisiana State University, Baton Rouge, LA. He earned Bachelor's and Master's degrees in Physics at New College, Oxford University. He then worked in the Clarendon Laboratory, Oxford University, on magnetic resonance in rare earth metal alloys, and was awarded the D.Phil. degree in 1980. Next followed a period as a Postdoctoral Research Assistant in the Engineering Science Department, Oxford University, where he worked on surface-acoustic wave devices. From 1982 to 1983, he was Senior Scientist at Plessey Research (Caswell) Ltd., Towcester, specializing in semiconductor lasers and LED systems. He was then a Lecturer (and Senior Lecturer from 1993) in Electronic and Electrical Engineering at the University of Sheffield. During this period, he managed projects on the design, development, and test of microwave acoustic devices, III-V heterojunction bipolar transistors, avalanche photodiodes, high-temperature superconductors, and other solid-state devices. In 1989 he was awarded a British Association Fellowship, and in 1995 he was Professeur Invité at the Laboratoire de Physique de la Matière at the Institut National des Sciences Appliquées de Lyon, France. He was a Full Professor of Electrical and Computer Engineering at Iowa State University, Ames, Iowa, from January 2002 to June 2006, before relocating to his current position. Dr. Woods has been a member of IEE Professional Group Committee S8 (Electromagnetics), IEE Professional Group Committee E3 (Microelectronics and Superconductor Devices); the international awarding committee for Marie Curie Fellowships supported by the European Commission in Brussels; and numerous National Science Foundation SBIR/STTR panels. For several years he was Associate Editor of the IEE Electronics and Communication Engineering Journal, and has been a consultant for Barnsley Business and Innovation

Centre Ltd., McLarens Ltd., Price Waterhouse, John Lovell Associates, Halpern & Ward Associates, the European Commission in Brussels, and Ashton Brown Associates among others. He has current research interests in novel solid-state devices, device modeling, and magnetic recording, and has authored more than 90 research publications in these fields including the text "Digital logic design" with B. Holdsworth (Newnes, 2002). He was recently awarded the D.Sc. Higher Doctorate by the University of Oxford in recognition of his distinguished research career spanning many years. He is a Fellow of IET, a Senior Member of IEEE, and a member of ASEE. Dr. Woods has been interested in research concerning gravitational waves for many years and participated in the first International HFGW Conference at the MITRE Corporation in 2003.

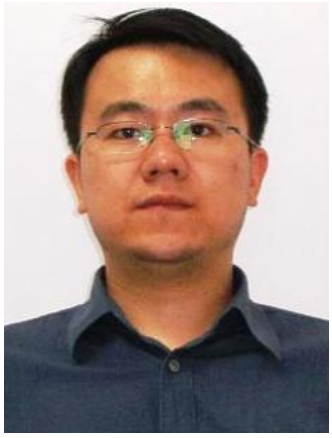
Yang Zhang

Yang Zhang received his Bachelor Degree in Engineering at Peking Institute of Technology in 1982, Master Degree in Physics at Dalian Institute of Technology, and Ph.D in Physics at University of Wisconsin-Milwaukee in 1991. He has been working at University of Science and Technology of China since 1993, he was Associate Director of Astrophysics Center during 1996-2000, and Chairman of Dept. of Astronomy and Applied Physics during 2004-2006. He visited MP Institute for Gravity (Golm) and MP Institute for Astrophysics (Garching) in 2003. Currently he is a Professor in Physics and the Associate Dean of School of Sciences. He was once the Head of Cosmology Division of Chinese Astronomical Society during 1998-2002 and is now a Board Member of Chinese Society of Gravity. Y. Zhang's research fields are cosmology and gravity, including relic gravitational waves, dark energy, CMB, and large scale structure of the universe. As a distinguished feature, RGWs have a wide spectrum ranging from 10^{-18} to 10^{10} Hz, providing possibilities of detection by a variety of methods, such as laser interferometers, CMB polarization, and electromagnetic waves. The GHz band of RGWs is especially relevant to HFGW detections. For the past several years, Y. Zhang has been advocating GWs detection in China, and currently collaborating with Professor Fangyu Li and others for a possible project of HFGW detection.

Chuan-Ming Zhou

Professor Chuan-Ming Zhou is the Director of the Science and Technology Committee of Institute of Electronic Engineering of the Chinese Academy of Engineering Physics. He received Bachelor's degree in Optical engineering from *Sichuan University*, China in 1964 and has been active in the area of microwave detection since that time. He is broadly interested in communication, RF, and optics and is the Chief Scientist of the Chinese High-Frequency Gravitational Wave (HFGW) Microwave detection team. He is leading the work on initial-phase preparation for the prototype design of the Chinese HFGW detector based on the Gaussian-beam model of Professor Fang-Yu Li. In this regard, Zhou's team's focus is a feasibility study of the signal processing scheme for very weak signal detection, Gaussian-beam antenna design, and the analyses of the extremely low environmental-noise level of the anechoic (microwave echo free) HFGW detector chamber.

Jie Zhou



Jie Zhou is a Vice Professor, Chief of Signal Processing Division of Institute of Electronic Engineering of China Academy of Engineering Physics. He has a Bachelor's degree in communication engineering from *Sichuan University*, China in 1995 and a Master's degree in communication and information system from the graduate college of *Chinese Academy of Engineering Physics* in 2001. He is currently a doctorial student in communication and information system with the *University of Electronic Science and Technology of China*. Jie Zhou's current interests include signal processing in communication systems, weak signal acquisition and detection. His research team is working on prophase preparation for the prototype design of the HFGW detector based on the Gaussian beam model of Prof. Fang-Yu Li. In this regard, Zhou's team's focus is a feasible signal processing scheme for very weak signal detection, which can be less than -190dBw. In addition to the classical weak signal processing method such as narrow PLL, FFT and correlating, some new processing algorithm now in vogue for communication will be analyzed. Zhou's tentative research topic is mainly about weak signal acquisition and processing for the detection of HFGWs.

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(Support Staff – Not a Participant)

Christine Black

Scientific Assistant to Dr. Baker

Christine Black is an undergraduate student (2007) at *The University of Michigan*, majoring in Physics and Astronomy and has had introductory courses in EM Theory, Celestial Mechanics, optics, special relativity and astronomical techniques with a GPA of 2.89. Ms. Black is a Student Apprentice on the *GravWave Team*. She has a keen interest in HFGW research.

Bonnie Baker

Hostess for 2nd International HFGW Workshop