

ORGANISATION NAME:

**School of Science, Griffith University**

CHIEF CONTACT PERSON:

**Prof. A. Knight**

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NATHAN QLD. 4111**

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ONE PARAGRAPH SUMMAR OF ACTIVITES INVOLVING OPTICS  
AND LASERS:

ORGANISATION NAME:

**School of Science, Griffith University**

CHIEF CONTACT PERSON:

**Assoc. Prof. W.R. MacGillivray**

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ONE PARAGRAPH SUMMAR OF ACTIVITES INVOLVING OPTICS  
AND LASERS:

**Fundamental research into the resonant interaction between CW lasers and atoms. In particular, quantum optics, atom manipulation, interrogation of electron - atom collisions (quantum optics, spectroscopy)**

ORGANISATION NAME:

**Experimental Laser Group**

CHIEF CONTACT PERSON:

**Norman Heckenberg**

POSTAL ADDRESS:

**Experimental Laser Group  
Physics Dept.  
The University of Qld.  
BRISBANE. QLD 4072.**

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FAX: (07) 365 1242

E-MAIL: HECKENBERG.@NEWTON.PHYSICS.UQ.OZ.AU

ONE PARAGRAPH SUMMARY OF ACTIVITIES INVOLVING  
OPTICS AND LASERS:

**Infrared nonlinear optics (nonlinear optics), far infrared lasers (lasers, measurement), chaos in lasers (lasers) pattern formation in lasers (lasers, information processing) optical trapping of atoms and particles (spectroscopy, laser applications) laser induced fluorescence in hypersonic gas flows (lasers, sensing) DFWM in hypersonic gas flows (laser application, spectroscopy) microwave monitoring of fluidised beds (measurement sensing).**

ORGANISATION NAME:

**University of Central Qld**

CHIEF CONTACT PERSON:

**J. Wilkinson**

POSTAL ADDRESS:

**Department of Applied Physics,  
Unviersity of Central Queensland,  
ROCKHAMPTON QLD 4702**

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FAX: (079) 309 209

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ONE PARAGRAPH SUMMARY OF ACTIVITES INVOLVING  
OPTICS AND LASERS:

**Astronomy, holography, image processing.**

ORGANISATION NAME:

**School of Optometry**

CHIEF CONTACT PERSON:

**Assoc. Prof. David Atchison**

POSTAL ADDRESS:

**School of Optometry  
Queensland University of Technology  
GPO Box 2434  
BRISBANE QLD. 4001**

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FAX: (07) 864 1607

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ONE PARAGRAPH SUMMARY OF ACTIVITIES INVOLVING  
OPTICS AND LASERS:

**Research in eyes and vision. Use of lasers limited mainly to help aligning optical apparatus but also used as providing monochromatic light of a target for visual stimulation. Optics involving visual experiments and ophthalmic optics equipment, biomicroscopes, ophthalmoscopes, retinoscopes, fundus cameras, keratometers, photokeratoscopes, refractive head, projector charts, auto-refractors. Widespread use of ophthalmic optics correcting devices in health care, spectacle lenses, contact lenses.**

ORGANISATION NAME:

**Queensland University of Technology**

CHIEF CONTACT PERSON:

**Dr. M.D. Waterworth**

POSTAL ADDRESS:

**Physics School, QUT  
Gardens Point Campus  
GPO Box 2434  
BRISBANE QLD. 4001**

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FAX: (07) 864 1521

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ONE PARAGRAPH SUMMARY OF ACTIVITIES INVOLVING  
OPTICS AND LASERS:

**Laser cavity design with reference to unstable cavity resonators at visible and I.R. wavelengths. Use of lasers for environmental control, medical diagnostics, particularly early detection of breast cancers and other body abnormalities. Development of instrumentation to replace (eventually) mammography. Use of lasers for materials treatments - development of LD DLC and diamond films. Preparation of diamond and DLC films using PALVD and HFCVD . Optical characterisation of films etc. Preparation of high emphasis --conductors using I II III components. Design fabrication and testing of optical and electro-optical instrumentation.**

ORGANISATION NAME:

**Laserdyne Pty Ltd**

CHIEF CONTACT PERSON:

**John Kavanagh or Tim White**

POSTAL ADDRESS:

**PO Box 6541,  
Gold Coast Mail Centre Qld. 4217**

PHONE: (075) 949 772

FAX: (075) 949 981

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ONE PARAGRAPH SUMMARY OF ACTIVITIES INVOLVING  
OPTICS AND LASERS:

**Design and production of laser systems, optical components, and multilayer optical coatings for medical and defence applications. Also have joint venture with Hong Kong group for industrial applications of 3D layer modelling. Specialised coatings and coating designs for industrial lasers also other laser optics for research and defence.**

ADDITIONAL INFORMATION:

**Note on company: Laser Dynamics was placed in liquidation in 1991. Current staff of Laserdyne purchased assets of Laser Dynamics.**

ORGANISATION NAME:

**Prime Optics**

CHIEF CONTACT PERSON:

**Damien Jones**

POSTAL ADDRESS:

**17 Crescent Rd.  
Eumundi Qld. 4562**

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FAX: (074) 42 8804

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ONE PARAGRAPH SUMMARY OF ACTIVITIES INVOLVING  
OPTICS AND LASERS:

**Optical design, Instrument optics, Astronomical Optics, Optical design consultancy service offering research and development of optical systems for novel applications. Research is carried out to increase the understanding of the intrinsic properties of optical systems. A rigorous approach, using the aberration coefficients of Buchdahl, is employed and incorporated into in-house optical design software. Results of original research are published.**



ORGANISATION NAME:

**James Cook University**

CHIEF CONTACT PERSON:

**John Nicol**

POSTAL ADDRESS:

**Physics Department,  
James Cook University,  
Townsville. Qld. 4811**

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FAX: (077) 79 5717

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ONE PARAGRAPH SUMMARY OF ACTIVITIES INVOLVING  
OPTICS AND LASERS :

**Measurement of pressure broadening and shift of spectral lines in emission and absorption. Time resolved spectroscopy and collisional redistribution of optically induced polarization. Theoretical studies of spectral line broadening and laser induced collisional excitation transfer (LICET). Lasers applications; spectroscopy.**

ORGANISATION NAME:

**Laser Electronics (Operations) Pty LTd.**

CHIEF CONTACT PERSON:

**R.C. Holberton**

POSTAL ADDRESS:

**PO Box 359,  
Southport. Qld. 4215.**

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ONE PARAGRAPH SUMMARY OF ACTIVITIES INVOLVING  
OPTICS AND LASERS

**Distribution and representative of lasers, optics and electronic products. Previously a manufacturer of lasers and laser systems. For scientific, medical and industrial applications.**