

## COVERING LETTER

Dear Sir/Madam,

Please, put attention to this CV.

Mainly I am searching the collaboration/employment in the field of Optical Design Engineer (as I have a great experience in this field), but my specialty also may fit the field of Machine Learning or Data Science in IT sphere.

**Remote work mode is preferable, but relocation is also not excluded.**

### **List of companies with whom I collaborated in various projects last year:**

- Automotive head lighting – PROBRIGHT (Russia) – <http://probright.ru> (<https://diliht.ru>)
- Waveguide projecting systems – COLOUR HOLOGRAPHIC LIMITED (England) – <http://www.trulifeoptics.com>
- Laser ray-tracing aberrometer, visual aberration measurement research (guidance of Prof. V.V.Molebny) – Tracey technologies (USA) – <http://www.traceytechnologies.com/>

**Please, see CV on next page.**

# OLEKSANDR LUTSENKO

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## PURPOSES

Exciting work or collaboration mainly in the field of OPTICAL DESIGN, engineering and IT with great team in the international large-scale company that brings creativity and innovations. Concept creation, researching, calculation and optimization of the various optical systems. Mathematics and physics knowledge is also providing.

Remote work mode is preferable, but relocation is also not excluded.

## CORE SKILLS AND COMPETENCES

- Optical design and simulation in Zemax using both sequential and non-sequential modes including multi-configurational systems, image building, data processing etc.;
- Intensive idea generation about different approaches for the tasks to be solved and finding the best way for realization of the mission;
- Perform optimization, tolerancing, systematization and reporting of collected data;
- Great experience in visual optics calculation (optical system of the eye);
- Great experience in digital high-definition visualization systems for microscopy;
- Ability to solve completely different engineering and technical tasks;
- Intermediate written and spoken English

## EXPERIENCE

November  
2005 -  
Present

### **Small-Scale Enterprise (FOP) Lutsenko O.V., Digital Visualization Systems for High Definition Microscopy, Chernihiv, Ukraine,**

Director of the project and leading specialist in the fields:

- Optical design, research, calculation and optimization of the optical systems (Zemax optical design), optical engineering;
- Trading of equipment for microscopy: (professional high definition microscopy for native blood analysis, school educational microscopes, industrial video microscopes);
- Re-equipment of microscopes (installation of a digital imaging system);
- Small-scale manufacturing of microscope accessories (stands, holders, adapters).

### **Project activity in the field of optical design:**

- Elaboration of the optical tube for the transferring the images from the projector.
- Elaboration of the special type optical resonator for generating coherent optical radiation with a metal-vapor laser (copper, gold) for multiply increasing power.
- Elaboration of the principal and optical scheme of Diffraction Spectrum Analyzer - for measuring some physical and chemical properties of a grain.
- Elaboration of the special objective lens for laser beam scanning - "Ef-theta lens" (f- $\theta$  lens) - for industrial laser processing (cutting) the materials.
- Elaboration of the optical scheme of the Diffraction Monochromator for local use.
- Design of the optical scheme of the local Spectral Image Analyzer based on back scattering.
- Elaboration and engineering of a specialized (projecting) short-focus lens for LED (Bi-LED) lightning for car headlights (low and high beams) for Diliht (ProBright) company.
- Elaboration of narrow beam (long distance) automotive LED floodlight (fishing and hunting purposes).
- Waveguide optics design for input into the eye of additional video information from the projection display;
- Simulation of the ray path in the optical system of light microscope. Design of the optical-mechanical adapter to obtain the necessary parameters of the image focusing.
- Research the optical system of the eye. Research the methods of measurement, calculation and visualization of wave, ray and refractive aberrations of the eye as well as corneal shape and eye length. Participation in the development of the conceptual and optical scheme of the advanced laser raytracing aberrometer and kerato-topographer with different additional functions (eye length measure etc.).

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| September<br>2004 -<br>October<br>2005<br>(1 year<br>2 months) | <b>Lucent Technologies (LT CheZaRa Ltd.)</b> , Chernihiv, Ukraine,<br>Telecommunication engineer, equipment test engineer,<br>Installation, test and operation of modern telecommunication equipment of Lucent Technologies, Bell Labs<br>Innovations, USA.<br>Specialization: transmission, multiplexers (facilities of data transmission between switches via optical<br>fibers).<br>Participation in the projects of telephone exchange and multiplexer intallation (2004-2005): Kharkiv,<br>Zhitomir, Kremenchuk, Donetsk, Lugansk, Mariupil, Poltava, Sumy). |
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| June<br>2000 -<br>August<br>2004<br>(4 years<br>3 months) | <b>Institute of Biomedical Engineering, Academy of Technological Sciences of Ukraine</b> ,<br>directed by prof. V.V.Molebny (Sc.D.), Kiev, Ukraine,<br>Junior Scientist, PhD student, optical engineer, optician.<br>Research assistant activities:<br>- Elaboration of the methods of determination and calculation the aberration of the optical system of the<br>human eye, computer modeling, software research;<br>- Assembling, installation, testing and service of laser raytracing aberrometer in clinical conditions;<br>- Official journeys, PhD work prepare. |
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### PATENTS AND SCIENTIFIC ACTIVITIES

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|-------------------|--|
| 2002-2003         | <b>Declaration Patent of Ukraine.</b> Method of calibration of laser raytracing aberrometer (53064 A),<br>V.V.Molebny, O.V.Lutsenko  |
| 2018<br>December  | Publication in Collection of scientific papers of the Third Ukrainian Scientific and Technical Conference<br>(State Space Agency of Ukraine; State Enterprise of Special Instrument-Making "Arsenal")          |
| 2018<br>August    | Participation in material research for presentation in Vision and Physiological Optics Conference in Athens,<br>VPO-2018 (V.Molebny, V.Sokurenko, O.Lutsenko)  |
| 2017<br>November  | Participation in Qingdao International Technology Transfer Conference & Aoshan Eurasian Science and<br>Technology Forum (Qingdao, China)   |
| 2017<br>September | Participation and presentation in The Third China-Ukraine Forum of Science and Technology (Harbin,<br>Chengdu, China)  |
| 2001              | Participation in Summer School in Visual Optics, Halkidiki, Greece;  |
| 2001-2004         | Publications (5) in such local scientific journals as "Bulletin of Taras Shevchenko National University of<br>Kyiv", "Electronics and communication" (KPI, Kyiv), "Bulletin of Poltava Pedagogical University" |

### EDUCATION

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|-----------|--|
| 2001-2004 | Post-graduate study. (PhD work is still in processing. Not completed yet)<br>Taras Shevchenko National University of Kyiv, Physical Department, Optics chair;<br>Specialty: optics, laser physics;<br>Study and research in physics, optics, lasers, mathematics, programming, scientific and technical<br>applications etc.<br>Subject: Laser ray tracing method in calculation of the aberrations of the eye optical system. |
| 2002-2003 | Work and research as PhD student in Vardinoyanian Eye Institute of Crete, Greece (5 months)  |
| 1995-2001 | Master's degree.<br>Taras Shevchenko National University of Kyiv, Physical Department, Optics chair<br>Specialty: Lasers and optoelectronics<br>Master's work subject: Study of collective vibrational modes in the Raman spectra of aqueous solutions<br>(using diffraction photo spectrometer)   |

### HONORS

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| 2010-2014 | The best honor: son (9), daughter (7) and daughter (5).  |
| 2001      | Darewych Foundation grant (Canada) for the best final master's work at the Optics Chair of the<br>University (both scientific content and correct Ukrainian spelling). |
| 1995      | Gold Medal for Excellent High School Graduation :))  |

### ABOUT MYSELF

41 years old, good sense of humor, driving license, married, three children (5, 7 and 9 years old), without bad habits;  
interesting in fishing, tourism, travel, viticulture (vines), winemaking, percussion music (djembe).