



**Keywords:** Vision; Digital age; Contact lenses; Laser; Spectacles; Light therapy

## Introduction

In the past few years, there has been a significant change in the way we view and manage eye health. The digital age has brought about a revolution in the way we interact with technology, and this has had a profound impact on the field of optometry. The use of contact lenses, laser surgery, and light therapy are just a few examples of the innovative treatments and technologies that have emerged in recent years. This article will explore the latest developments in optometry and how they are changing the way we care for our eyes.

he def ai f he a e , he di lace e f he bea i g ca be de e i ed. SLP i ca able f high- eed ea e e a d e ela i el i le e e i e e [5].

**Advantages of vision-based displacement measurement**

**Non-contact measurement:** Vi i -ba ed eh d d e i e h ical c ac i h he i lai bea i g, eli i a i g he i k f i e fe e ce i h he e ' d a ic .

**High accuracy:** Wi h ad a ce e i ca ea ech l g a d i age ce i g al g i h , vi i -ba ed eh d ca ach i e v e high le v el f ea e e acc ac [6].

**Real-time monitoring:** Ce ai vi i -ba ed ech i e , ch a LSV, e he ad a age f ea l i e i i g, v i d i g i e d i a e feedback he di lace e beha i f he i lai bea i g.

**Full-field measurement:** Vi i -ba ed ech i e v i d e a a iall di i b ed di lace e eld, e abli g e g i e e b e v e l cali ed di lace e a d de c e ial i e i he bea i g' beha i [7].

**Challenges and limitations**

**Lighting conditions:** Vi i -ba ed ech i e a e e i i e

e gi ee i g e e . A ech l g c i e ad a ce, vi i -ba ed di lace e ea e e i e ec ed la a i al le i e e i g he a fe a d eliabili f v a i i f a e e .

Rega d le f he la ge all def ai f he i lai bea i g, he he he ca e ai ed v i g, he h i al di lace e i e hi b ai ed b he v i al eh di al he a ea he e d b ai ed b he di lace e e e . e ea e e e i la ge he he ca e ai v i g. H e v e, c a ed i h he e d ea ed b he di lace e e e , he ab l e e f he eak h i al di lace e i le ha l , a d he e ai i le ha 1.5%, hich ee he acc ac e i e e f he h i al di lace e ea e e f he i lai bea i g. i e d h ha he ed v i al eh d ca c le e he h i al def ai de ec i f he i lai bea i g de v a i c di i .

e a v e f e d f he v e ical di lace e i e hi c v e ea ed b he v i al eh di ba icall he a ea he i e hi c v e f he di lace e e e , b i c a e c i l al g i h he i e i . + e ea i ha he v e ical di lace e f he i lai bea i g i le ha l . C a ed i h he ab l e v al e f he v e ical di lace e , he e a ic e ca ed b he v i al ea e e eh di clea, b h e ai l ab l e e v i l 1.851 . Li i ed b he e i e ale i e , he di lace e f he ca e ai he e e i e i ±8 . I he ac al ei ic v e , he ca e ai ed he g d e e e e , he ela i e di lace e be ee he ca e a a d he i lai bea i g i he h i al di lace e f he i lai bea i g, a d he a ge f di lace e ca be e i a ed i ad a ce. e ef e, i f he eld f i e f he ca e ai e be ide ha he h i al di lace e f he i lai bea i g, he acc a e ea e e e d ca be b ai ed. i eh di illa licable ac al ei ici lai jec .

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