

# Free and open source tools for interactive training

**EIFL TRAIN-THE-TRAINER  
BOOTCAMP - NOV. 2023**

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BAUER

CUE — SLOW — REVER — PLAY  
START — LAP — DATE — NORMAL — NEG/POS  
STOP — RESET — STOP WATCH

BAUER  
VIDEO CAMERA  
VCE 266 AF

NEWICON

AUTO FOCUS

# New media / Digital technologies

AR



QR

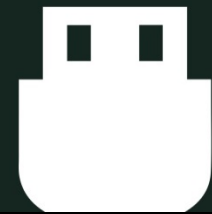
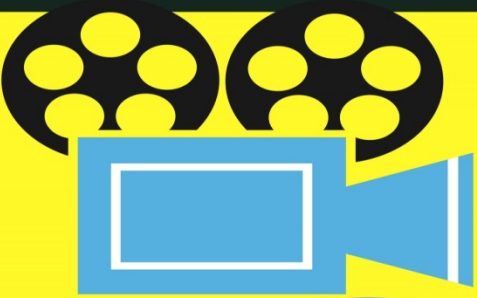
VR



WWW



# MODERN LIBRARY



# New services / Improving

Photo by Pixabay from Pexels: <https://www.pexels.com/photo/laptop-technology-ipad-tablet-35550/>



# Needs of modern user



# Digital transformation



# Digital skills

- Information and data literacy,
- Communication & collaboration,
- Content creation,
- Safety,
- Problem solving



# Digital skills

- Information and data literacy,
- Communication & collaboration,
- **Content creation**
- Safety,
- Problem solving

Multimedia:

Audio

Video

Poster

Animation

AR (Augmented reality)

VR (Virtual reality)

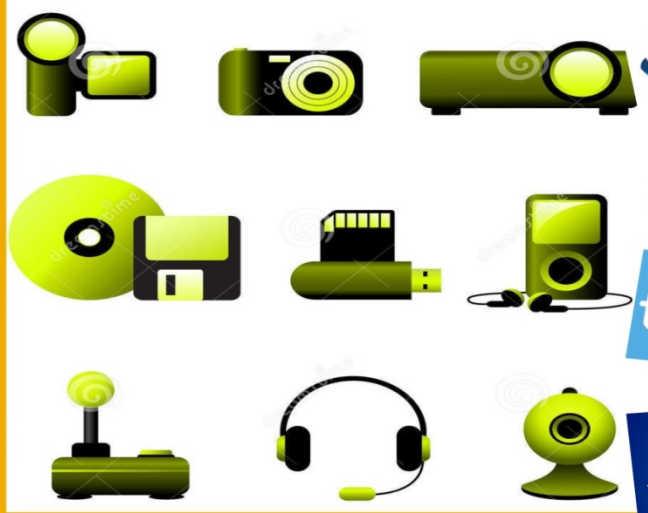
QR technology

Marketing, Social network

# Multimedia



Basic  
multimedia  
formats



Gadgets/Devices



Programs,  
apps,  
tools..

# Formats

99d

## Image file formats



### Raster images

Pixel-based graphics  
Resolution dependent  
Photos & web graphics

<b>JPG</b> Web & print photos and quick previews	<b>GIF</b> Animation & transparency in limited colors	<b>PNG</b> Transparency with millions of colors	<b>TIFF</b> High quality print graphics and scans	<b>RAW</b> Unprocessed data from digital cameras	<b>PSD</b> Layered Adobe Photoshop design files
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### Vector images

Curve-based graphics  
Resolution independent  
Logos, icons, & type

<b>PDF</b> Print files and web-based documents	<b>EPS</b> Individual vector design elements	<b>AI</b> Original Adobe Illustrator design files	<b>SVG</b> Vector files for web publishing
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## Video Formats

The most popular video file formats



**MP4**

Supported by all browsers and most major devices.



**MXF**

Developed by SMPTE to contain video, audio, and metadata.



**MOV**

Great for broadcast and editing.



**AVI**

The ideal format for media archiving.

## TOP AUDIO FORMATS (QUALITIES)

	MP3 lossy	AAC lossy	FLAC lossless	WAV lossless	RAW lossless	AAX lossy
quality			✓	✓	✓	
low weight	✓	✓				✓
compatibility	✓	✓	✓	✓		
metadata	✓	✓			✓	

mconverter.eu



WEBP



WEBM

# Formats

## FileInfo.com

The File Format Database

Search (e.g. jpg, gif, png, tif)



Search over 10,000 file extensions and software programs.

 [Advanced Search](#)

 [Submit a File Type](#)



Drag and drop or **upload a file** to view file details.

File Types



ONLINE-CONVERT.COM

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### Free online file converter

Convert media files online from one format into another. Please select the target format below:



Audio converter

Select target format...



Go



Video converter

Select target format...



Go



Image converter

Select target format...



Go



Document converter

Select target format...



Go



Ebook converter

Select target format...



Go



Archive converter

Select target format...



Go



Hash generator



BOOK TRAILERS  
VIDEO INSTRUCTIONS  
VIDEO TUTORIALS  
PROJECTS  
MARKETING

VIDEO ABSTRACT  
VIDEO CV

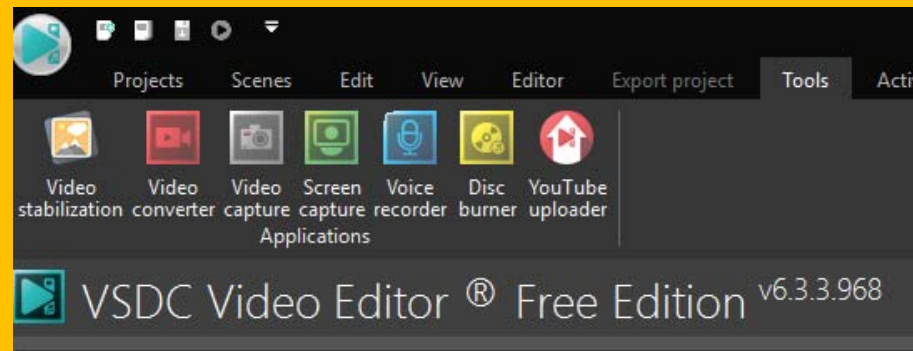
**OBS**



**Studio**

# SCREEN VIDEO RECORDING SOFTWARE

**SCREENCASTOMATIC**

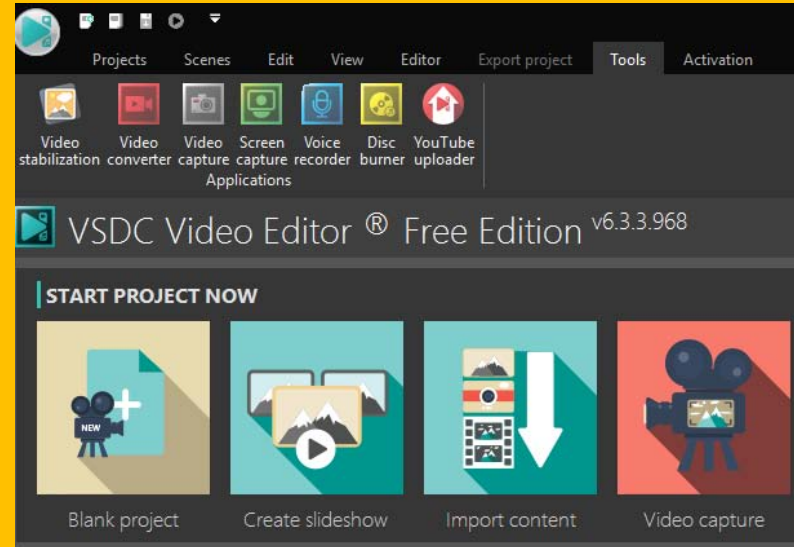


# Video tutorial – Desktop recording

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# OPEN AND FREE SOFTWARE



# Canva

# Video – Book trailer

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# Video abstract / Video CV

## New Journal of Physics

The open access journal at the forefront of physics

Email alert

RSS feed

Deutsche Physikalische Gesellschaft

New Journal of Physics > Volume 12 > August 2010

Lucian Livadaru et al 2010 *New J. Phys.* **12** 083018 doi:10.1088/1367-2630/12/8/083018

### Dangling-bond charge qubit on a silicon surface

Lucian Livadaru<sup>1,2,5</sup>, Peng Xue<sup>3,4</sup>, Zahra Shaterzadeh-Yazdi<sup>3</sup>, Gino A DiLabio<sup>1</sup>, Josh Mutus<sup>2</sup>, Jason L Pitters<sup>1</sup>, Barry C Sanders<sup>3</sup> and Robert A Wolkow<sup>1,2</sup>

[Show affiliations](#)



Tag this article



PDF (733 KB)



View article

Abstract

References

Cited By

Metrics

Two closely spaced dangling bonds (DBs) positioned on a silicon surface and sharing an excess electron are revealed to be a strong candidate for a charge qubit. Based on our study of the coherent dynamics of this qubit, its extremely high tunneling rate  $\sim 10^{14} \text{ s}^{-1}$  greatly exceeds the expected decoherence rates for a silicon-based system, thereby overcoming a critical obstacle of charge qubit quantum computing (QC). We investigate possible configurations of DB qubits for QC devices. A first-order analysis of coherent dynamics of DBs shows promise in this respect.

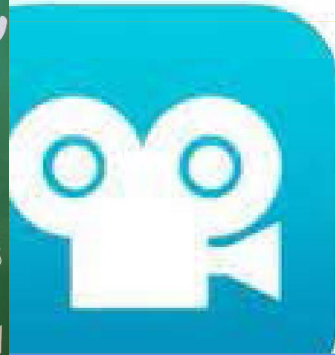
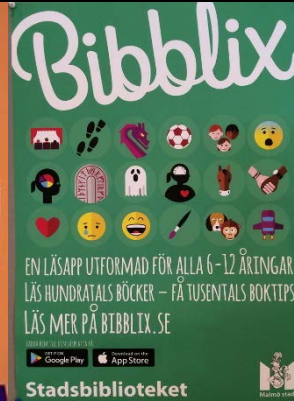


Dr. Lucian Livadaru

00:14

04:32

# Apps...



**Stop Motion Studio**

Let's Make a Movie.  
CATEATER, LLC

#114 in Photo & Video

★★★★★ 4.6, 8.9K Ratings

Free - Offers In-App Purchases

# YouCut

Podar • Música • Filtrar • Efecto



• Editor de video profesional



# Prezi

tellagami



# ANIMATIONS

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# ANIMATIONS

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# AR (Augmented reality)



# AR (Augmented reality)





**HALO AR**



HALO AR

# Virtual Reality - VR



Photo by Norma Mortenson  
<https://www.pexels.com/photo-a-young-boy-wearing-vr-glasses-8457325>



Photo by fauxels from Pexels:

## Sites in VR



Mosque



Tomb



Palace



Museum



Inn



Bath



Castle



House



Square



Park



Nature



Religious



Ancient



Space





# Libraries promote

Digital Ethics  
Equity  
Participation  
Collective experience  
Diversity  
Democratic values

# Libraries help with

Inclusivness  
Job seeking  
Career and College prep  
Mental health  
Digital divide

# Digital Divide

## Social

Literacy skills

Disability vs. fit

Age: Old vs. young

Under-developed nations vs. first world countries

Family background (income and education)

## Economic

Poverty, i.e. unaffordability

Lack of international investment and funding in poorer countries

## Culture

Ethnicity and language (non-English speaking)

## Geographical

Rural areas vs. suburban

Under-developed nations vs. first world countries

## Approach

Fear of technology, or 'technophobes'

Lack of motivation or objective









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