



OWASP®

# The Next 25 Years

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Andrew van der Stock  
Executive Director  
OWASP Foundation, Inc.



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SECURITY GROUP



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84.



PentesterLab

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**VERACODE**

Without them, this Conference couldn't happen.



# Andrew van der Stock

Executive Director, OWASP Foundation  
Former Board member 2015-2018

OWASP Top 10 co-leader  
Former OWASP ASVS co-leader  
Former OWASP DevGuide leader

AppSec since 1998  
Cats

# No more insecure software

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```
types.Operator):
    X mirror to the selected ob
    ject.mirror_mirror_x"
    for X"
```

To be the global  
open community  
that powers  
secure software  
through  
education, tools,  
and collaboration

As the world's largest non-profit organization concerned with software security, OWASP:

Supports the building of impactful projects

Develops & nurtures communities through events and chapter meetings worldwide

Provides educational publications & resources

Enable developers to write better software, and security professionals to make the world's software more secure.



NBSIR 76-1041

# **Security Analysis and Enhancements of Computer Operating Systems**

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Institute for Computer Sciences and Technology  
National Bureau of Standards  
Washington, D. C. 20234

April, 1976

Final Report



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U S. DEPARTMENT OF COMMERCE  
NATIONAL BUREAU OF STANDARDS



3.6	Category of Method	. . . . .
3.7	Category of Exploitation	. . . . .
3.8	Detailed Description of Operating System Security Flaws	. .
a.	Incomplete Parameter Validation	. . . . .
b.	Inconsistent Parameter Validation	. . . . .
c.	Implicit Sharing of Privileged/Confidential Data	. . .
d.	Asynchronous Validation/Inadequate Serialization	. . .
e.	Inadequate Identification/Authorization/Authentication	
f.	Violable Prohibition/Limit	. . . . .
g.	Exploitable Logic Error	. . . . .

	26 lower-case <i>n</i> letters	36 lower-case letters and digits	62 alpha- numeric characters	95 printable characters	all 128 ASCII characters
1	30 msec.	40 msec.	80 msec.	120 msec.	160 msec.
2	800 msec.	2 sec.	5 sec.	11 sec.	20 sec.
3	22 sec.	58 sec.	5 min.	17 min.	44 min.
4	10 min.	35 min.	5 hrs.	28 hrs.	93 hrs.
5	4 hrs.	21 hrs.	318 hrs.	112 days	500 days
6	107 hrs.	760 hrs.	2.2 yrs.	29 yrs.	174 yrs.

One has to conclude that it is no great matter for someone with access to a PDP-11 to test all lower-case alphabetic strings up to length five and, given access to the machine for, say, several weekends, to test all such strings up to six characters in length. By using such a program against a collection of actual encrypted passwords, a substantial fraction of all the passwords will be found.



# Evolution of the OWASP Top 10

2003

A1	<b>Unvalidated parameters</b>
A2	Broken access control
A3	Broken authentication and session management
A4	Cross Site Scripting (xss) Flaws
A5	Buffer overflows
A6	Command Injection Flaws
A7	Error Handling Problems
A8	Insecure use of cryptography
A9	Remote administration flaws
A10	Web and application server misconfiguration



# Evolution of the OWASP Top 10

2004

A1	<b>Unvalidated input</b>
A2	Broken access control
A3	Broken authentication and session management
A4	Cross Site Scripting (xss) Flaws
A5	Buffer overflows
A6	Injection Flaws
A7	Improper Error Handling
A8	Insecure storage
A9	Denial of service
A10	Insecure configuration management



# Evolution of the OWASP Top 10

2007

A1	<b>Cross site scripting (xss)</b>
A2	Injection Flaws
A3	Malicious File Execution
A4	Insecure Direct Object Reference
A5	Cross Site Request Forgery (CSRF)
A6	Information Leakage and Improper Error Handling
A7	Broken authentication and session management
A8	Insecure cryptographic storage
A9	Insecure communication
A10	Failure to restrict URL access



# Evolution of the OWASP Top 10

2010

A1	<b>Injection</b>
A2	Cross Site Scripting (xss)
A3	Broken Authentication and Session Management
A4	Insecure Direct Object References
A5	Cross Site Request Forgery (CSRF)
A6	Security Misconfiguration
A7	Insecure Cryptographic Storage
A8	Failure to Restrict URL Access
A9	Insufficient Transport Layer Protection
A10	Unvalidated Redirects and Forwards



# Evolution of the OWASP Top 10

2013

A1	<b>Injection</b>
A2	Broken Authentication and Session Management
A3	Cross Site Scripting (xss)
A4	Insecure Direct Object References
A5	Security Misconfiguration
A6	Sensitive Data Exposure
A7	Missing Function Level Access Control
A8	Cross Site Request Forgery (CSRF)
A9	Using Known Vulnerable Components
A10	Unvalidated Redirects and Forwards



# Evolution of the OWASP Top 10

A1	<b>Injection</b>
A2	Broken Authentication
A3	Sensitive Data Exposure
A4	XML External Entities (XXE)
A5	Broken Access Control
A6	Security Misconfiguration
A7	Cross Site Scripting (xss)
A8	Insecure Deserialization
A9	Using Components with Known Vulnerabilities
A10	Insufficient Logging and Monitoring

2017



# Evolution of the OWASP Top 10

2021

A1	<b>Broken Access Control</b>
A2	Cryptographic Failures
A3	Injection
A4	Insecure Design
A5	Security Misconfiguration
A6	Vulnerable and Outdated Components
A7	Identification and Authentication Failures
A8	Software and data integrity failures
A9	Security Logging and Monitoring failures
A10	Server Side Request Forgery (SSRF)



# OWASP: The first nearly 25 years



# Humble but ambitious beginnings

Started by three people in Mark Curphey's apartment in September 2001

“In short the project aims to help everyone build more secure web applications and web services.”

- First Website December 2001
  - SSL available after 2011



## NAVIGATION

## About OWASP

Mission

Organizational Chart

FAQ

Get Involved

Licensing

Contact OWASP

## Application Security Projects

Attack Components

Informational

Input Validation

Session Management

Parameter Manipulation

Buffer Overflows

Cryptographic

Format Strings

Race Conditions

Testing Framework

Project Schedule

## Resources

Framework Tools

Tutorials

Links

Books

## Home

## OFFICIAL LAUNCH

We are extremely pleased to finally officially launch OWASP, the "Open Web Application Security Project". For those that have been following the site and mailing list for the last 8 weeks you'll be a part of the 250,000 web hits, and this will be nothing new, but given our new technical committee it made sense to re-launch the efforts with some basic work already done.

In short the project aims to help everyone build more secure web applications and web services. We will be covering a wide range of related work over the coming years and have initially defined two areas to concentrate on.

**Attack Components** - The Application Security Attack Components project was started as an attempt to create common language and definitions for which much of the other work planned at OWASP can later benefit. When describing security issues in web applications or when attempting to model security it is very easy to describe the same issue in many different ways, seemingly creating new problems. When analyzing problems described on Bugtraq it is evident that most problems are variants of common issues, but applied to different applications or systems using different parameters or targets. The aim is definitely not to build the biggest list of problems or describe attacks like Nimda or Code Red; but to document the underlying primary attack components that are used in attacks so people can learn to avoid developing them and others can learn to test for them.

We have a good initial start although focused on mainly external attack black-box type issues. The current list can be found [here](#). With our new team we hope to flesh out this list to include internal "with knowledge" attacks as well as cryptographic issues and any other classes we need to include. The work is scheduled to take place in December of this year.

**Testing Framework** - As with any emerging technology like web application security where there is a lack of documented knowledge and experience, it is hard to know how to be sure that security has been implemented correctly; protecting the application, the data and the user. As in the early days of network security some people would have you believe application security is a black art. If you ask a security vendor to conduct an application security review today, it could consist of anything from a consultant pressing "scan now" on an automated tool designed to find holes in operating systems, to a full blown line by line code review. What is the correct way to test security of web applications and web services? The Web Application Security Testing Framework is setting out to produce an industry standard blueprint for how to methodically test the security of all web applications and web services. The work is likely to include modelling security attacks (maybe in XML) and is likely to use "Attack Trees" to define paths of attack. The framework will be open to all and will be extensible to be able to be used in all web applications scenarios. It will discuss the difference between white-box testing and black box testing, describe tool and techniques as well as describe how to conduct tests, analyze results, fix problems and report findings. The framework will help everyone build more secure web applications and web services. One ultimate goal that has been put forward is to also produce a web service where all users can download sets of known or experimental attacks (and possibly build them online) for import into reference tools either developed by the project or commercial tools. The specifications would be published and made freely available. The web service effectively would de-couple the current situation where commercial tools have both knowledge and techniques, thus making the security knowledge available to everyone and the tools stand on the merit of the tools themselves. This idea will depend on funding, probably from the government.

## NEW OWASP TECHNICAL COMMITTEE

The Technical Committee is made up of renowned application security experts who ensure that the work and ideas produced by the project are technically sound. These people have a wealth of experience and knowledge and will be guiding much of the direction of the work in various areas. As well as participating on the mailing list the technical committee has a monthly conference call to discuss progress. They are the OWASP technical think tank!

## • Elias Levy

- probably best known as the long-time moderator of Bugtraq at [securityfocus.com](#) and author of "Smashing the Stack for Fun and Profit"

## • Chris Wysopal

- formerly with the L0pht and heads up the [@Stake](#) Application Security Center of Excellence.

## • John Viega

- wrote 'the' book on "Building Secure Software" and is author of RATS (Rough Auditing Tool for Security) as well as hundreds of articles and several other books. John is the CTO of [Secure Software](#).

## • Greg Hoglund

- well known for his work on buffer overflows and his Black Hat presentations, as well a respected developer of security and fault injection software at [ClicktoSecure](#).

## OWASP WEBSLEUTH

WebSleuth is an early release of a concept tool which will become part of the Testing Framework Toolkit. We hope to have a complete suite of open source tools including source code analyzers which support the Testing Framework and help people secure their web applications. Released under the OWASP open source license, WebSleuth allows you to manually browse a web application, intercepting traffic and being able to modify it in the fly in real-time, exploring security. This allows you to change cookies, generate raw HTTP requests, parse HTML and client-side JavaScripts, as well as automatically parsing comments and forms for known issues. The next release due this week will incorporate the ability to test for cross-site scripting in all web forms.

It works over HTTP and SSL without having to use a proxy. The application is not cross platform and only runs on Win32 as it make extensive use of the Internet Explorer object. The lead developer [David Zimmer](#) is always looking for feedback and ways to improve the tool.

Download from our [Framework Tools](#) section.

## NEWS UPDATES

## moreover...

Excelsys - Database Design/Development...

Ad - <http://www.excelsys.com> Thu Oct 14 2004 10:43:00 GMT+0000 (Coordinated Universal Time)

WebMethods wraps process software in Fabric ...

CNET Asia Thu Oct 14 2004 10:43:00 GMT+0000 (Coordinated Universal Time)

The State of Python-XML in 2004 ...

XML Thu Oct 14 2004 05:10:00 GMT+0000 (Coordinated Universal Time)

Mercator Lines Q2 net rises 275% to Rs 32 cr ...

Financial Express Wed Oct 13 2004 21:56:00 GMT+0000 (Coordinated Universal Time)

NetSky.B Worm Gains More Traction...

PC Magazine Fri Feb 20 2004 14:20:00 GMT+0000 (Coordinated Universal Time)

Firewall VPN sales soar...

The Register Fri Feb 20 2004 14:13:00 GMT+0000 (Coordinated Universal Time)

DoS and phishing attacks: coming to a mobile near you?...

Silicon.com Fri Feb 20 2004 13:15:00 GMT+0000 (Coordinated Universal Time)

Verisign named Internet Villain in UK ISP awards...

Mac User Fri Feb 20 2004 12:56:00 GMT+0000 (Coordinated Universal Time)

News powered by Moreover Technologies...



# OWASP Foundation

Founded April 2004 by Jeff Williams and Dave Wichers

- Non-stock membership organization
- IRS 501 (c) (3)
- Deliberately kept small
- First full-time employee wasn't until 2011
- Currently, six staff and one contractor

First appointed Board 2007

First elected Board 2011

Revised Certificate of Incorporation and Bylaws 2024



# Community



2001 – 2019  
Listman mail lists



2019–  
Google Groups

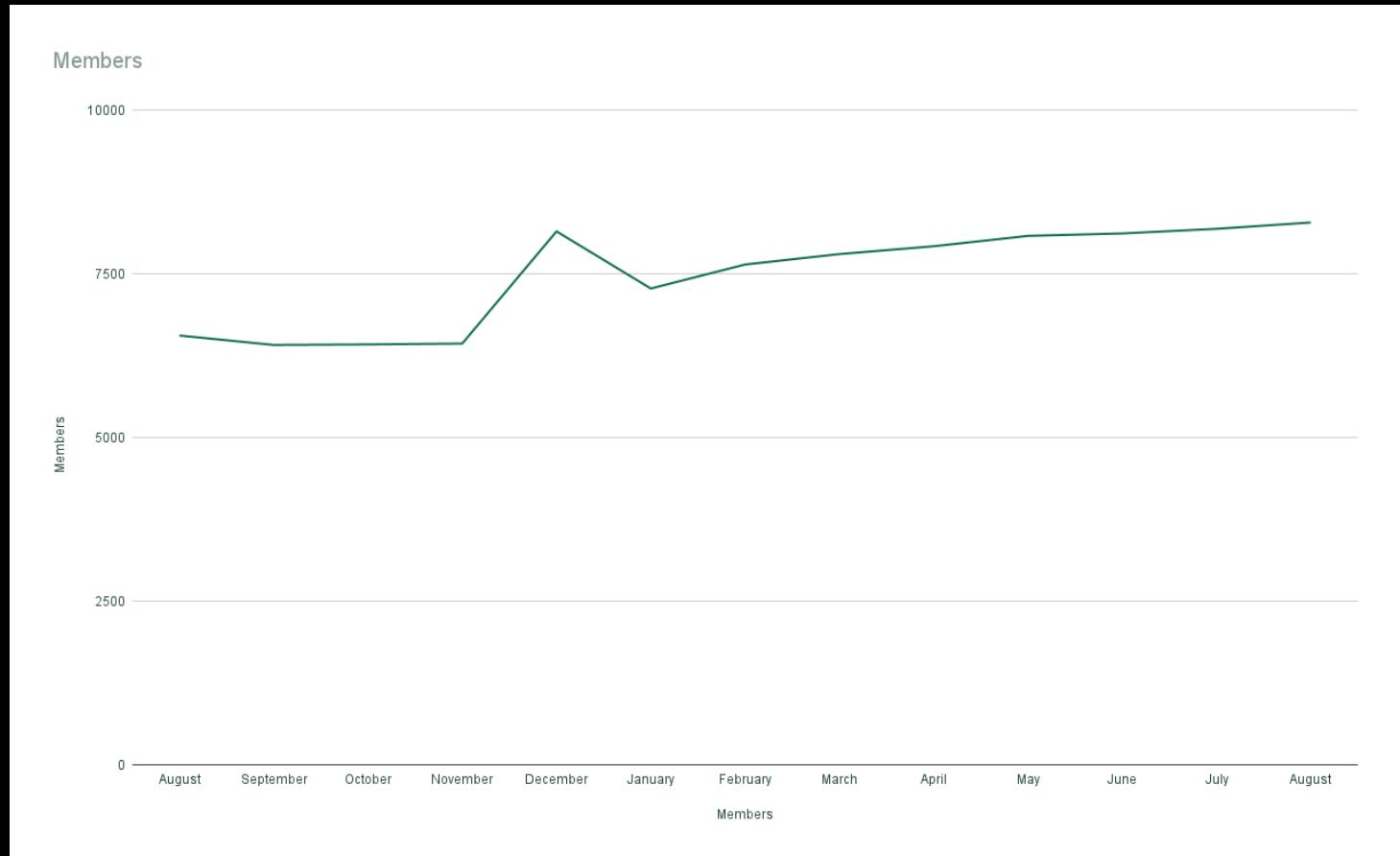


2015–  
Slack

# Members

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- First members 2006
  - \$100 USD per year
- Now 8339 members
- Leaders as members



# First chapters

First chapters August  
2004

Quickly spread all  
over the world

- Los Angeles
- Boston
- San Antonio
- London
- Panama City
- Austria
- Atlanta
- Washington DC
- Toronto
- Switzerland
- Rochester, New York
- New York City
- Ireland
- San Francisco
- Sydney



Now  
279  
Chapters



# First projects

- First projects:
  - Testing Framework
  - Attack Components
  - WebSleuth
  - XML Data Exchange
- Developer Guide 1.0 2002
- OWASP Top 10 1.0 Jan 2003

```
mirror_mod = modifier_obj
# Set mirror object to mirror
mirror_mod.mirror_object = selected_obj
if operation == "MIRROR_X":
    mirror_mod.use_x = True
    mirror_mod.use_y = False
    mirror_mod.use_z = False
elif operation == "MIRROR_Y":
    mirror_mod.use_x = False
    mirror_mod.use_y = True
    mirror_mod.use_z = False
elif operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True

#selection at the end -add
modifier_obj.select= 1
selected_modifier_obj.select=1
bpy.context.scene.objects.active = bpy.data.objects[("Selected" + str(modifier_obj)).split('.')[0]]
modifier_obj.select = 0
bpy.context.selected_objects.append(selected_modifier_obj)
bpy.data.objects[one.name].select = 1
print("please select exactly one object")
#----- OPERATOR CLASSES -----
#----- OPERATOR CLASSES -----
#----- OPERATOR CLASSES -----
```

# Now

# 345 Projects

- Flagship
- Production
- Lab
- Incubator

OWASP Amass  
OWASP Application Security Verification Standard (ASVS)  
OWASP Cheat Sheet Series  
OWASP CycloneDX  
OWASP Defectdojo  
OWASP Dependency-Check  
OWASP Dependency-Track  
OWASP Juice Shop  
OWASP Mobile Application Security  
OWASP CRS  
OWASP OWTF  
OWASP SAMM  
OWASP Security Shepherd  
OWASP Top Ten

# First events



# Now

# 100+ Events

- Lisbon OWASP SnowFROC
- San Francisco OWASP BASC
- Singapore OWASP AppSec Days PNW
- AppSec EU 2025 OWASP AppSec Days Spain
- AppSec USA (DC) OWASP AppSec Days Panama
- AppSec NZ 2025 OWASP German Day
- OWASP AppSec Days Virtual India
- OWASP BeNeLux
- OWASP Lascon
- ... and many more!

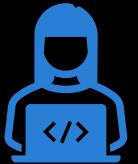
A wide-angle photograph of a paved road curving through a rural landscape. The road is dark asphalt with white dashed lines and a solid yellow center line. It curves from the bottom left towards the horizon. The surrounding area is a mix of golden-yellow fields and green pastures. In the background, there are rolling hills covered with a mix of green and autumn-colored trees. The sky is blue with some scattered white clouds.

The road to 2026  
Achievable Hairy Audacious Goals

# Agile all the things



OWASP Projects are often stuck in the waterfall and on-prem age



Projects consumable by developers



Align with current development practices (cloud, CI/CD)

# Developer Outreach



WE NEED TO SPEAK AT  
DEVELOPER CONFERENCES



WE NEED TO TRAIN AT  
DEVELOPER CONFERENCES



WE NEED BOOTHS AT  
DEVELOPER CONFERENCES



OWASP IS SKIPPING RSA,  
BLACK HAT, AND DEFCON

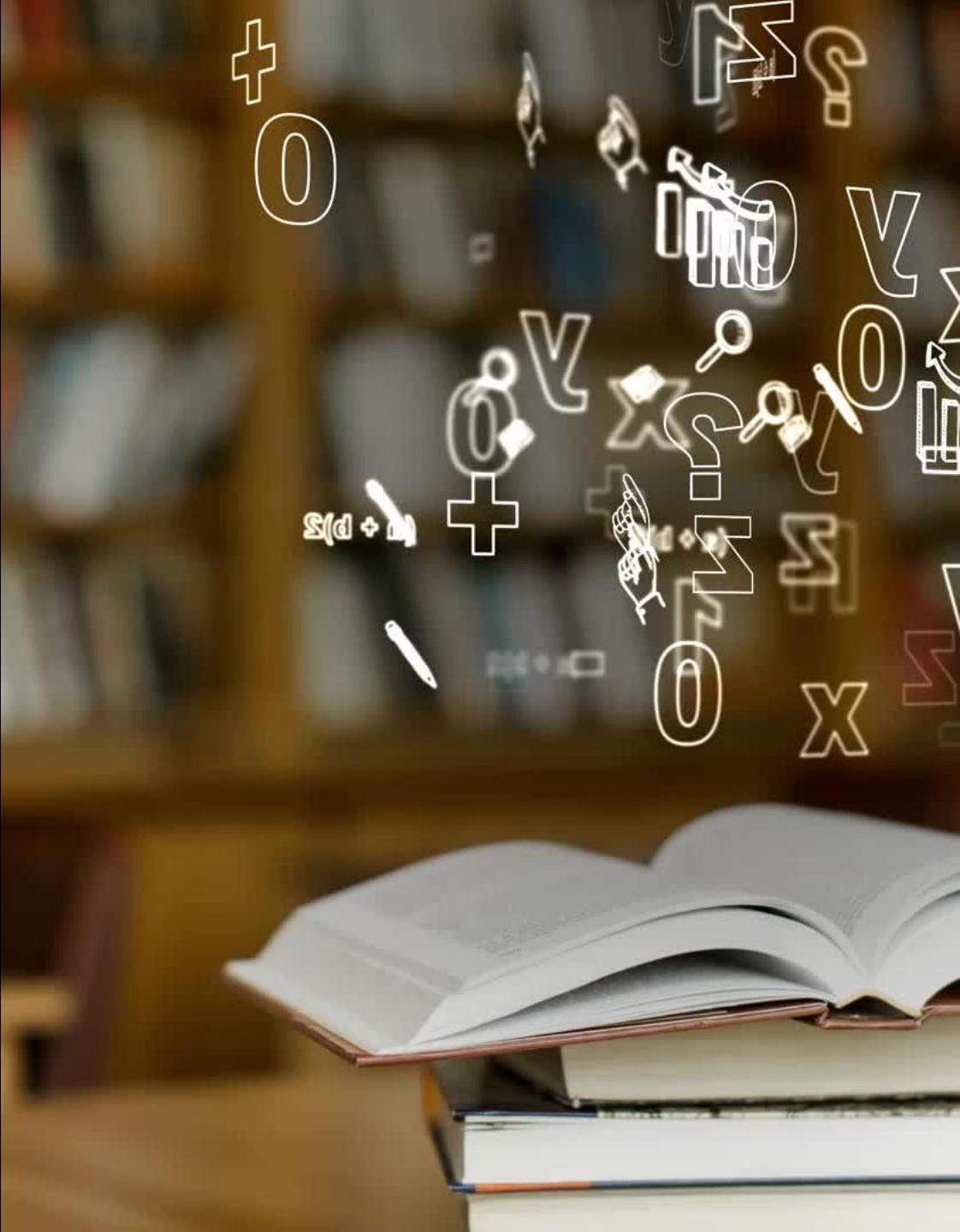
# Education

Academic basis for our field

Open Tertiary Curriculum and Syllabus

Open Industry Curriculum

Open Textbooks



# Chapters in every large city

If you live in a city with more than one million population  
... and you don't have a chapter

**START ONE!**

Wellington  
Mexico City, Osaka, Kinshasa,  
Chicago, Ho Chi Minh City



# Larger events

- Events are OWASP's primary fundraiser
- 2000+ attendees for AppSec US/EU
- Modernizing CFP/CFT process
- Moving to Sessionize
- Need more review volunteers!



# Corporate Supporters



Banks



Large organizations with a development function



FinTech Startups

The background of the image is a black and white aerial photograph of a field. The field features a large, faint bullseye or target pattern composed of concentric circles and radiating lines. The terrain appears slightly textured and uneven.

# The next 25 years

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A Call to Action!

# Like it or not, the future is AI

AI is good, but it's not perfect.  
Not everything is a Kiwi

Humans cannot outsource responsibility to AI



# Get involved!

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OWASP is YOU!



# Become a member!

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[owasp.org](https://owasp.org) > Join



# AppSec: The Next Generation

We need to attract the best and brightest developers to the application security field

High School Career Paths  
Industry re-training  
Certification





# Project Fill the Gaps

- Create the future!
- Scale us!
- Framework security
- Architecture
- Agile security
- AppSec as developers



# Volunteer for a project!

[owasp.org](https://owasp.org) > Projects >  
Browse all projects



# Start a project!

[owasp.org](https://owasp.org) > Projects > Create a project



# Funding for the next level

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Grants for projects

Giving Tuesday December 3  
Matching donations!  
Donate!

Become a corporate  
supporter!



# Go to your chapter!

[owasp.org](http://owasp.org) > Chapters > Find a local chapter

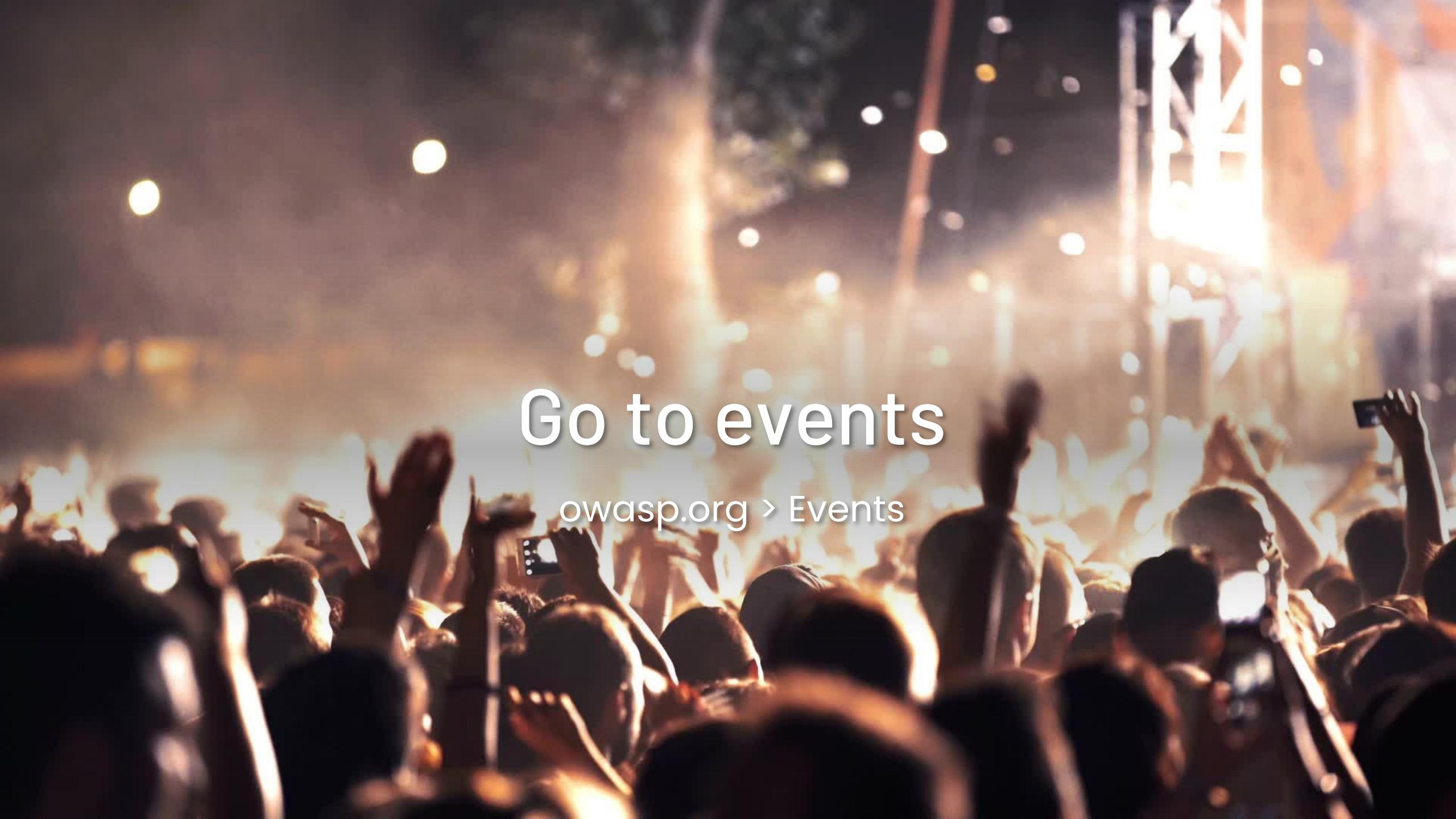
[Meetup.com](https://Meetup.com) > Search your nearby area for OWASP





# Start a chapter!

[owasp.org > Chapters > Start a local chapter](https://owasp.org/Chapters)

A blurred background image of a concert crowd. Many hands are raised in the air, some holding smartphones to take pictures. The stage is visible in the distance, illuminated by bright, colorful lights.

Go to events

[owasp.org](https://owasp.org) > Events

A vibrant night scene of a European street, likely in Paris, showing a row of bars and restaurants. The signs for "CREPERIE" and "LA TATOUERIE" are prominent. People are walking along the sidewalk, and others are seated at outdoor tables. The atmosphere is lively and colorful.

One more  
thing...







OWASP<sup>®</sup>

# Thank you!

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@vanderaj ← most platforms