

# A Survey of Privacy and Security Issues in Social Networks

Constantin SPÂNU

”Alexandru Ioan Cuza” Police Academy, Bucharest, Romania  
cosmin.spanu@ymail.com

## Abstract

*Social networking sites such as Facebook and Twitter have gained more popularity in recent years. Because of its large user base, and large amount of information, they become a potential channel for attackers to exploit. Many social networking sites try to prevent those exploitations, but many attackers are still able to overcome those security countermeasures by using different techniques. Social network users may not be aware of such threats. Therefore, this paper will present a survey on different privacy and security issues in online social networks. The issues include privacy issues, identity theft, social networks spam, social networks malware, and physical threats. Social network privacy issues, social network security issues, social network threats, identity Theft, social network spam, social network malware, Facebook worms, Twitter Worms.*

**Keywords:** social network privacy issues, social network security issues, social network threats, identity Theft, social network spam, social network malware

## References

- [1]. [Socialnomics11] - “Social Network Users Statistics”, <http://www.socialnomics.net/2011/08/16/social-network-users-statistics/>.
- [2]. [Boyd07] - D. M. Boyd and N. B. Ellison, “Social Network Sites: Definition, History and Scholarship”, *J. Computer-Mediated Communication*, vol.13, no.1, Oct. 2007, pp. 210-30, <http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html>.
- [3]. [Irani10] – Danesh Irani, Marco Balduzzi, Davide Balzarotti, Engin Kirda and Calton Pu, “Reverse Social Engineering Attacks in Online Social Networks”, *Iseclab*, Mar. 2010, pp. 55-74, <http://www.iseclab.org/people/embyte/papers/rse.pdf>.
- [4]. [Wondracek10] – Gilbert Wondracek, Thorsten Holz, Engin Kirda and Christopher Kruegel, “Practical Attack to De-anonymize Social Network Users”, *IEEE Symposium on Security and Privacy*, 2010, pp. 223-238, <http://iseclab.org/papers/sonda-TR.pdf>.
- [5]. [Hackers] – “Steal Browser History without Java Script”, <http://hackers.org/blog/20070228/steal-browser-history-without-javascript>.
- [6]. [Zhou08] – Bin Zhou and Jian Pei, “Preserving Privacy in Social Networking against Neighborhood Attacks”, *Data Engineering*, 2008. *ICDE 2008. IEEE 24th International Conference*, Apr. 2008, pp. 506-515, <http://www.cs.sfu.ca/~jpei/publications/NeighborhoodAnonymization-ICDE08.pdf>.
- [7]. [Bilge09] – Leyla Bilge, Thorsten Trufe, Davide Balzarotti and Engin Kirda, “All your contacts are belong to us: automated identify theft attacks on social networks”, *WWW '09 Proceedings of the 18th International conference on World Wide Web*, 2009, pp. 551-560, <http://www.iseclab.org/papers/www-socialnets.pdf>.

- [8]. [NetSecurity10] – “Facebook users think social networking spam is a problem”, <http://www.net-security.org/secworld.php?id=10208>.
- [9]. [Brown08] – Garrett Brown, Travis Howe, Micheal Ihbe, Atul Prakash and Kevin Borders, “Social Networks and context-aware spam”, CSCW '08 Proceedings of the 2008 ACM conference on Computer supported cooperative work, 2008, pp. 403-412, [http://www.eecs.umich.edu/~aprakash/papers/cscw08\\_socialnetworkspam.pdf](http://www.eecs.umich.edu/~aprakash/papers/cscw08_socialnetworkspam.pdf).
- [10]. [Huber11] – M. Huber, M. Mulazzani, E. Weippl, G. Kitzler and S. Goluch, “Friend-in-the-Middle-Attacks: Exploiting Social Networking Sites for Spam”, Internet Computing, IEEE, vol. 15, no.3, May-Jun. 2011, pp. 28-34.
- [11]. [NetSecurity11] - “Online social networks: Malware launch pads”, [http://www.net-security.org/malware\\_news.php?id=1895](http://www.net-security.org/malware_news.php?id=1895).
- [12]. [PCWorld11] - “Drive-by Download Attack on Facebook Used Malicious Ads”, [http://www.pcworld.com/businesscenter/article/241164/driveby\\_download\\_attack\\_on\\_facebook\\_used\\_malicious\\_ads.html](http://www.pcworld.com/businesscenter/article/241164/driveby_download_attack_on_facebook_used_malicious_ads.html).
- [13]. [Symantec] - “Malicious Shortened URLs on Social Networking Sites”, [http://www.symantec.com/business/threatreport/topic.jsp?id=threat\\_activity\\_trends&aid=malicious\\_shortened\\_urls](http://www.symantec.com/business/threatreport/topic.jsp?id=threat_activity_trends&aid=malicious_shortened_urls).
- [14]. [Acunetix] - “Exploiting a cross-site scripting vulnerability on Facebook”, <http://www.acunetix.com/websitesecurity/xss-facebook.htm>.
- [15]. [Isaca11] - Exploitation - Social Networks Malware, ISACA Journal, [http://www.rkmingenieria.com/ifol/wp-content/uploads/2011/03/ISACA\\_JAN\\_2011\\_Chain\\_Exploitation.pdf](http://www.rkmingenieria.com/ifol/wp-content/uploads/2011/03/ISACA_JAN_2011_Chain_Exploitation.pdf).
- [16]. [NakedSecurity11\_1] - “What is FouTube? Viral Facebook clickjacking video scams explored”, <http://nakedsecurity.sophos.com/2011/03/12/what-is-foutube-viral-facebookclickjacking-video-scams-explored/>.
- [17]. [USAToday10] - “Facebook Hit by Another Version of Koobface”, <http://content.usatoday.com/communities/technologylive/post/2010/04/facebookhit-by-another-version-of-koobface-worm/1>.
- [18]. [NakedSecurity11\_2] - “Profile Spy rogue application spreads virally on Twitter”, <http://nakedsecurity.sophos.com/2011/04/04/profile-spy-rogue-application-spreadsvirally-on-twitter/>.
- [19]. [Zdnet11] - “Twitter worm hits goo.gl, redirects to fake anti-virus”, <http://www.zdnet.com/blog/security/twitter-worm-hits-googl-redirects-to-fakeanti-virus/7938>.
- [20]. [Securitynews11] - “Will Facebook's Radical New Changes Threaten Users' Security?”, <http://www.securitynewsdaily.com/facebook-changes-worries-1201/>.
- [21]. [Balduzzi10] – M. Balduzzi, C. Platzer, T. Holz, E. Kirda, D. Balzarotti and C. Kruegel, “Abusing Social Networks for Automated User Profiling”, Symposium on Recent Advances in Intrusion Detection (RAID), vol. 6307, Sep. 2010, pp. 422-441, <http://iseclab.org/papers/socialabuse-TR.pdf>.
- [22]. [Krishnamurthy08] - Balachander Krishnamurthy and Craig E. Wills, “Characterizing Privacy in Online Social Networks,” WOSN '08 Proceedings of the first workshop on Online social networks, 2008, pp. 37-42, <http://www2.research.att.com/~bala/papers/posn.pdf>.
- [23]. [Faghani09] - M.R.Faghani and H. Saidi, “Social Networks XSS Worms,” Computational Science and Engineering, 2009. CSE '09. International Conference on, Oct 2009, pp. 1137-1141, <http://faghani.info/CSE09.pdf>.
- [24]. [Threatpost10] - “Location-Based Services Raise Privacy, Security Risks”, [http://threatpost.com/en\\_us/blogs/location-based-services-raise-privacy-security-risks-082510](http://threatpost.com/en_us/blogs/location-based-services-raise-privacy-security-risks-082510).