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## Cyber Warfare and the Laws of War

The information revolution has transformed both modern societies and the way in which they conduct warfare. *Cyber Warfare and the Laws of War* analyses the status of computer network attacks in international law and examines their treatment under the laws of armed conflict. The first part of the book deals with the resort to force by states and discusses the threshold issues of force and armed attack by examining the permitted responses against such attacks. The second part offers a comprehensive analysis of the applicability of international humanitarian law to computer network attacks. By examining the legal framework regulating these attacks, Heather Harrison Dinniss addresses the issues associated with this method of attack in terms of the current law and explores the underlying debates which are shaping the modern laws applicable in armed conflict.

HEATHER HARRISON DINNISS is a postdoctoral research fellow at the International Law Centre of the Swedish National Defence College. She has previously taught at the London School of Economics and Political Science and at the School of Oriental and African Studies, University of London. Her research focuses on the impact of modern warfare on international humanitarian law, in particular, on advanced and autonomous weapons systems and the status and use of computer network attacks in the law of armed conflict.

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*For Marc*  
Thank you ... for everything

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## List of abbreviations

|  |  |
|--|--|
| ADIL                                       | Annual Digest and Reports of Public International Law Cases  |
| Additional Protocol I<br><i>also</i> API   | Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977      |
| Additional Protocol II<br><i>also</i> APII | Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), 8 June 1977 |
| <i>AFJ Log.</i>                            | <i>Air Force Journal of Logistics</i>  |
| <i>AFL Rev.</i>                            | <i>Air Force Law Review</i>  |
| <i>AJIL</i>                                | <i>American Journal of International Law</i>   |
| <i>Am. U. L. Rev.</i>                      | <i>American University Law Review</i>  |
| <i>ASIL Proc.</i>                          | <i>American Society of International Law Proceedings</i>   |
| BFSP                                       | British and Foreign State Papers.  |
| BMJ  | <i>British Medical Journal</i>   |
| <i>BU Int'l L. J.</i>                      | <i>Boston University International Law Journal</i>   |
| <i>BU J. Sci. &amp; Tech. L.</i>           | <i>Boston University Journal of Science and Technology</i>   |
| BYBIL                                      | <i>British Yearbook of International Law</i>   |
| <i>Case W. Res. J. Int'l L.</i>            | <i>Case Western Reserve Journal of International Law</i>   |
| <i>Chi. J. Int'l L.</i>                    | <i>Chinese Journal of International Law</i>  |
| CNA  | Computer Network Attack  |
| <i>Col. J. Trans. L.</i>                   | <i>Columbia Journal of Transnational Law</i>   |
| Conventional Weapons Treaty                | Convention on Prohibitions or Restrictions on the Use of Certain Conventional  |



|                          |  |
|--------------------------|--|
|                          | Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, 10 October 1980                                 |
| CPU                      | central processing unit  |
| DCS                      | distributed control system   |
| DDoS                     | distributed denial of service  |
| <i>EJIL</i>              | <i>European Journal of International Law</i>   |
| EMP                      | electromagnetic pulse  |
| ENMOD                    | Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, 10 December 1976              |
| FRY                      | Federal Republic of Yugoslavia   |
| Geneva Convention I      | Geneva Convention for the Amelioration of the Condition of the Sick and Wounded in Armed Forces in the Field of August 12, 1949            |
| Geneva Convention II     | Geneva Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea of August 12, 1949 |
| Geneva Convention III    | Geneva Convention relative to the Treatment of Prisoners of War of August 12, 1949   |
| Geneva Convention IV     | Geneva Convention relative to the Protection of Civilian Persons in Time of War of August 12, 1949   |
| <i>GJIA</i>              | <i>Georgetown Journal of International Affairs</i>   |
| GovExec                  | Government Executive   |
| Hague Convention 1899    | Hague Convention Concerning the Laws and Customs of War on Land  |
| Hague Regulations        | Regulations Annexed to the 1907 Hague Convention IV Respecting the Laws and Customs of War on Land   |
| <i>Harv. Int'l L.J.</i>  | <i>Harvard International Law Journal</i>   |
| <i>Hous. J. Int'l L.</i> | <i>Houston Journal of International Law</i>  |
| HPCR                     | Harvard Program on Humanitarian Policy and Conflict Research   |
| IAEA                     | International Atomic Energy Agency   |
| ICBL                     | International Campaign to Ban Landmines  |
| ICJ                      | International Court of Justice   |

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|                                      |  |
|--------------------------------------|--|
| ICRC                                 | International Committee of the Red Cross   |
| ICTR                                 | International Criminal Tribunal for Rwanda   |
| ICTY                                 | International Criminal Tribunal for the Former Yugoslavia  |
| IFF                                  | Identification Friend or Foe   |
| IMF                                  | International Monetary Fund  |
| IO                                   | Information Operations   |
| IP Address                           | Internet Protocol Address  |
| IRRC                                 | <i>International Review of the Red Cross</i>   |
| <i>Israel Y.B. Hum. Rts</i>          | <i>Israeli Yearbook of Human Rights</i>  |
| IW                                   | Information Warfare  |
| <i>J. Legal Stud.</i>                | <i>Journal of Legal Studies</i>  |
| <i>JC&amp;SL</i>                     | <i>Journal of Conflict and Security Law</i>  |
| JSTARS                               | Joint Surveillance Target Attack Radar System  |
| <i>Keesings</i>                      | <i>Keesings Record of World Events</i>   |
| LOAC                                 | Laws of Armed Conflict   |
| <i>Mil. L. Rev.</i>                  | <i>Military Law Review</i>   |
| <i>NIL Rev.</i>                      | <i>Netherlands International Law Review</i>  |
| <i>NYU J. Int'l L. &amp; Pol.</i>    | <i>New York University Journal of International Law and Politics</i>   |
| NZLR                                 | <i>New Zealand Law Reports</i>   |
| OAS                                  | Organization of American States  |
| OUA                                  | Organisation of African Unity  |
| Ottawa Convention                    | Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction. |
| PMC                                  | Private Military Company   |
| RIAA                                 | Reports of International Arbitral Awards   |
| SCADA                                | Supervisory Control and Data Acquisition   |
| SCSL                                 | Special Court for Sierra Leone   |
| <i>Stan. J. Int'l L.</i>             | <i>Stanford Journal of International Law</i>   |
| <i>T. Jefferson L. Rev.</i>          | <i>Thomas Jefferson Law Review</i>   |
| <i>Tex. L. Rev.</i>                  | <i>Texas Law Review</i>  |
| <i>Tulsa J. Comp. &amp; Int'l L.</i> | <i>Tulsa Journal of Comparative &amp; International Law</i>  |
| UAV                                  | Unmanned Aerial Vehicle  |
| UN                                   | United Nations   |
| UNCIO                                | Documents of the United Nations Conference on International Organisation   |

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|                                      |   |
|--------------------------------------|---|
| UNTS                                 | United Nations Treaty Series  |
| UN Y. B. <i>Int'l L. Comm'n</i>      | <i>United Nations Yearbook of the International Law Commission</i>      |
| URL                                  | Universal Resource Locator (a web address)                              |
| US                                   | United States (of America)  |
| <i>USAF Acad. J. Legal Stud.</i>     | <i>US Air Force Academy Journal of Legal Studies</i>                    |
| <i>Vand. J Transnat'l L.</i>         | <i>Vanderbilt Journal of Transnational Law</i>                          |
| <i>Yale Hum. Rts &amp; Dev. L.J.</i> | <i>Yale Human Rights and Development Law Journal</i>                    |
| <i>Yale J. Int'l L.</i>              | <i>Yale Journal of International Law</i>                                |
| <i>ZaöRV</i>                         | <i>Zeitschrift für ausländisches öffentliches Recht und Völkerrecht</i> |