



Ngoc Ngo
Economist

PhD Economics
Northeastern University

MA Economics
Northeastern University

BA Economics
Bates College

Dr. Ngoc Ngo (“Nop No”) specializes in the advanced empirical analysis of intellectual property, antitrust and competition disputes. She has conducted quantitative economic analyses and managed complex client engagements in an array of intellectual property and other complex commercial litigation matters.

Dr. Ngo’s expert support work spans the telecommunication, medical device, pharmaceutical, consumer goods, computer software and industrial tools sectors. Example cases include:

- *Telecommunications.* For the owner of a portfolio of essential 4G patents, Dr. Ngo used data on sales of 3G, 4G and 5G devices to determine the fair market value of the 4G and 5G standards. She employed multiple technical studies of essentiality to apportion each standard’s value among the industry’s actually essential patents, including those held by an ITC complainant, rebutting the respondent’s claim that the complainant had not made a FRAND offer.
- *Consumer goods.* In a breach of contract dispute between the designer and manufacturer of atmospheric water generators, Dr. Ngo developed a model of industry pricing, establishing that the plaintiff had priced its device too high in relation to its feature set, and rebutting the plaintiff’s claim that the defendant’s manufacturing practices were to blame for its low sales.
- *Pharmaceutical.* In analyzing commercial success in a patent infringement dispute involving prescription drugs for improving Parkinson symptoms, Dr. Ngo developed an econometric model to show that the market would predict much fewer sales for an identical product but for the claimed invention, hence, providing evidence of commercial success for the product in spite of its 3% market share.
- *Orthopedic instruments.* Dr. Ngo computed the value of a patented tool used in total knee arthroplasty (knee replacement) surgery. Because the tool was not sold separately, and its usage was not tracked, Dr. Ngo analyzed survey evidence to determine the defendant’s profits based on incremental knee implant sales enabled by the tool.
- *Medical imaging.* In an application for a preliminary injunction in a trade secret dispute involving single-photon emission computed tomography (SPECT) imaging devices, Dr. Ngo analyzed the plaintiff’s proposed market definition and evolution, to rebut the plaintiff’s claim it enjoyed first-mover and other advantages in the claimed market.
- *Biologics.* In response to a claim of patent infringement by a biologic used in post-chemotherapy treatment for neutropenia, Dr. Ngo developed an advanced econometric model countering the plaintiff’s claim that the defendant’s biosimilar product diverted a disproportionate number of the plaintiff’s sales, showing instead that the plaintiff’s own long-acting product was an important substitute for the short-acting patented product.

- *Computer software.* Dr. Ngo analyzed the profit margin of a computer software company and showed that, despite the continuously negative operating profit due to its relatively early stage of development and large investment in R&D, the company had a very high incremental profit margin, serving as basis for lost profit calculations in a dispute involves copyright infringement, breach of contract, unfair competition and tortious interference.
- *Industrial tools.* In response to an application for a preliminary injunction for patents protecting battery-operated strapping tools, Dr. Ngo analyzed the causal nexus between the asserted patents and the alleged irreparable harm, rebutting the claim that the patents contributed to or maintained the plaintiff's competitive advantage.

Outside the context of litigation, Dr. Ngo consults with clients regarding the valuation of intellectual property assets, including the licensing of industry-leading patent portfolios. Dr. Ngo's ongoing research concerns improved methods of ranking patents within a portfolio, and methods of measuring the value of patents essential to multiple technical standards. She has also co-authored a paper analyzing patent output in China, and computing the true quantity and quality of Chinese patents after removing the effects of domestic subsidies.

Dr. Ngo completed her PhD in applied economics, with a focus on industrial organization, at Northeastern University in 2019. Dr. Ngo's dissertation focused on modeling consumer demand in the airline industry, and the antitrust and policy implications of various policy interventions. Before her doctoral studies, Dr. Ngo attended Bates College, where she graduated Phi Beta Kappa and *magna cum laude*, with a B.A. in Economics.

Expert testimony (client)

Case	Type	Market	Venue	Docket
<u>MMD US Operations v. Aurobindo Pharma Limited et al.</u> ^β	Commercial success	MAO-B inhibitors	D. Delaware	1:21-CV-00843-GBW

Project experience (client)

Case	Type	Market	Venue	Docket
<u>Splunk, Inc v. Cribl, Inc. and Clint Sharp</u> [†]	Copyright / unfair competition / breach of contract	Security information and event management software	N.D. California	3:22-cv-07611
<u>TexasLDPC v. Broadcom, LSI, Avago Techn.</u> [†]	Patent / copyright	WiFi chips / HDD controllers	D. Delaware	1:18-cv-01966-RGA
<u>Evolved Wireless v. Samsung</u> [‡]	Patent / FRAND	4G devices	E.D. Texas, Marshall Div.	2:21-CV-00033
Signode v. <u>Polychem</u> [*]	Patent / preliminary injunction	Battery-operated plastic strapping tools	D. Delaware	22-519-VAC-CJB
<u>Energy Conversion Devices Liquidation Trust v. Ovonyx, Micron and Intel</u> [†]	Fraudulent asset transfer	Phase-change memory modules	Bankruptcy Ct., E.D. Michigan	12-43166-TJT
Certain LTE-Complaint Cellular Communication Devices (<u>Evolved Wireless</u>) [†]	Patent / FRAND	3G/4G/5G devices	International Trade Commission	337-TA-1253
<u>Rasmussen Instruments v. DePuy Synthes Products</u> [‡]	Patent / commercial success	Knee arthroplasty instruments / implants	D. Massachusetts	1:20-CV-11807-WGY
Spectrum Dynamics v. <u>GE Healthcare</u> [†]	Trade secret / patent / preliminary injunction	Single-photon emission CT devices	S.D. New York	18-cv-11386 (VSB)
<u>InterDigital v. Lenovo and Motorola Mobility</u> [§]	FRAND	3G/4G/5G devices	High Court of Justice for England & Wales	HP-2019-000032
Skywell v. <u>Hon Hai (Foxconn)</u> [‡]	Breach of contract	Atmospheric water generators	JAMS arbitration	1210037103
<u>InterDigital v. Xiaomi</u> [§]	Patent / security payment / FRAND	3G/LTE handsets	High Court of New Delhi	C.S. (COMM) No. 295 / 2020
Amgen v. <u>Pfizer and Hospira</u> [§]	Patent	Biologic neutropenia treatments	D. Delaware	18-1064-CFC

[§] Consulted on economic models

* Managed expert report

† Managed report and deposition

‡ Managed report, deposition, and trial

β Expert report and deposition

Publications

Articles

“Does China Really Dominate Global Innovation? The Impact of China’s Subsidized Patent Application System” (with J. Putnam and H. Luu), *Hudson Institute*, March 24, 2021. Available at: <https://www.hudson.org/research/16777-does-china-really-dominate-global-innovation-the-impact-of-china-s-subsidized-patent-application-system>

“The advantages of using hedonic regression to measure the value of standardised technologies” (with H. Luu and A. Bos), *Intellectual Asset Management*, April 13, 2022.

Unpublished papers

“Innovative Output in China,” 2020. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3760816

“Airline Network-Structure Change, Consumer Welfare and Firm’s Costs,” Ph.D. dissertation, Northeastern University, 2019

“Mergers, Multimarket Contact and Intensity of Competition: The Case of Delta and Northwest,” 2019

“The Impact of Health Insurance Provision on the Usage of Preventive Care: Evidence from the Affordable Care Act,” (with Pukar KC), 2019

“Economies of Traffic Density in the Airline Industry: New Evidence from Six Dehub Cases,” 2019

Selected presentations and conferences

“Panel: How is a FRAND rate to be determined?” IAM Connect SEP Summit, September 2023

“The Impact of Health Insurance Provision on the Usage of Preventive Care: Evidence from the Affordable Care Act”, APPAM Regional Student Conference, April 2018

Selected research experience

Value of standard-essential patent portfolios in the telecommunications industry: 2019-present

Patent valuation ranking methods: 2019-present

Trade Liberalization and Local Labor Market Adjustment in South Africa, 2015



Grants, honors and awards

Northeastern Graduate Student Scholarship, 2013 - 2018

Northeastern Travel Grant, 2018

Phi Beta Kappa, Gamma Chapter of Bates College, Maine, 2012

Bates College Scholarship, 2008 - 2012

Past positions

Northeastern University, Boston, Massachusetts. 2013 – 2019

Research Assistant. 2014 – 2017

Instructor/Teaching Assistant. 2013 – 2019

Lecturer. 2018