

## PERSONNEL

Prof. Peter A. Wolff, Director  
Prof. Jonathan Allen, Associate Director

### Internal Advisory Committee

Prof. Jonathan Allen	Prof. Alan V. Oppenheim
Prof. Robert J. Birgeneau	Prof. William M. Siebert
Prof. Bruno Coppi	Prof. Louis D. Smullin
Prof. Shaoul Ezekiel	Prof. David H. Staelin
Prof. Morris Halle	Prof. Kenneth N. Stevens
Prof. John G. King	Prof. Peter A. Wolff
Prof. Daniel Kleppner	(Chairman)

### Professors

Adler, Richard B.	Hale, Kenneth L.	McCune, James E.
Allen, Jonathan	Halle, Morris	Morgenthaler, Frederic R.
Allis, William P.*	Harris, James W.	O'Neil, Wayne A.
Barrett, Alan H. †	Harvey, George G.*	Oppenheim, Alan V.
Bekefi, George	Haus, Hermann A.	Peake, William T.
Bers, Abraham	Ingard, Uno K.	Penfield, Paul, Jr.
Birgeneau, Robert J.	Ippen, Erich P. ‡	Pomorska, Krystyna
Bose, Amar G.	Jakobson, Roman*	Porkolab, Miklos
Burke, Bernard F.	Kennedy, Robert S.	Ross, John R.
Chen, Sow-Hsin	Keyser, Samuel J.	Schreiber, William F.
Chomsky, A. Noam	King, John G.	Siebert, William M.
Coppi, Bruno	Kiparsky, R. Paul V. †	Smullin, Louis D.
Dupree, Thomas H.	Kleppner, Daniel	Staelin, David H.
Eden, Murray †	Kyhl, Robert L.	Stevens, Kenneth N.
Edgerton, Harold E.*	Lee, Francis F.	Strandberg, Malcom W. P.
Fodor, Jerry A.	Lettvin, Jerome Y.	Wolff, Peter A.
Frishkopf, Lawrence S.	Lidsky, Lawrence M.	Zimmermann, Henry J.
	Litster, J. David	

### Associate Professors

Baggeroer, Arthur B.	Garrett, Merrill F.	Shapiro, Jeffrey H.
Blessner, Barry A.	Kastner, Mark A.	Sigmar, Dieter J. †
Braida, Louis D.	Kong, Jin Au	Troxel, Donald E.
Bresnan, Joan W.	Oman, Charles M.	Weiss, Thomas F.
Ezekiel, Shaoul	Pritchard, David E.	Willemain, Thomas R.
Fonstad, Clifton G., Jr.		Young, Ian T.

### Assistant Professors

Chu, Flora Y-F.	Muehlner, Dirk J.	Staley, Ralph H.
Gupta, Madhu S.	Myers, Philip C.	Toong, Hoo-min D.
Joannopoulos, John D.	Politzer, Peter A.	Warde, Cardinal ‡
McClellan, James H.	Scaturro, Louis S.	Waxman, Stephen G.
McFeely, Read F.		Wright, Edward L.

\*Emeritus

†Absent

‡Visiting

## PERSONNEL

### Senior Scientists

Durlach, Nathaniel I.

### Lecturers

Bourk, Terrance R.  
Houtsma, Adrian J. M.

Kiang, Nelson Y. S.

Piankian, Robert A.  
Searle, Campbell L.

### Research Associates and Postdoctoral Fellows

Burns, Edward M.  
Colburn, H. Steven  
Cooper, William E.  
Driver, Richard D.  
Eddington, Donald K.  
Freidin, Robert A.  
Gruberg, Edward R.  
Guinan, John J., Jr.  
Klatt, Dennis H.

Lau, Ying-Tung  
Mark, James W-K.  
Newman, Eric A.  
Perkell, Joseph S.  
Perlmutter, David M.  
Phillips, William D.  
Reed, Charlotte M.  
Rosenkranz, Philip W.  
Rosenthal, Stanley J.  
Sen, Abhijit

Shattuck-Hufnagel, Stefanie  
Sher, Stephanie E.  
Stephens, Peter W.  
Tetreault, David J.  
Thompson, Carl L.  
Walker, Edward C. T.  
Way, Kermit R.  
Yuen, Horace P. H.  
Zue, Victor W.

### Research Staff

Antonsen, Thomas M., Jr.  
Barrett, John W.  
Basu, Bamandas  
Coleman, John W.  
Edwards, Bruce E.  
Englade, Ronald C.  
Fisch, Nathaniel J.  
Fitzgerald, Edward W., Jr.

Freeman, Dennis M.  
Gonzalez, Manuel T.  
Hershcovitch, Ady  
Hunnicut, M. Sharon  
Kiang, Nelson Y. S.  
Kierstead, John D.  
Krapchev, Vladimir B.  
Littman, Michael G.  
McCarthy, John J.

McKenzie, John A.  
Papa, D. Cosmo  
Platzker, Aryeh  
Raymond, Stephen A.  
Sharky, Nazih N.  
Sorensen, John M.  
Tsang, Leung  
Weaver, James C.

### Visiting Scientists and Guests

Berent, Gerald P.  
Blumstein, Sheila E.  
Brown, Fielding  
Cerrillo, Manuel V.  
Chase, Sheila  
Choppy, Christine E.  
Crampton, Stuart J. B.  
Davidov, Dan  
Ducas, Theodore W.  
Eguchi, Takeo

Hopps, John H., Jr.  
Horn, Paul M.  
Jacobsen, Edward H.  
Leiber, Justin  
McKay, Graham R.  
Metcalf, Harold J.  
Migliulo, Stefano  
Mills, Allen W.  
Nicola, Carlo U.  
Patel, Vithalbhia L.  
Pegoraro, Francesco

Peterson, Peter G.  
Pollock, Jean Y.  
Rizzi, Luigi  
Snitzer, Elias  
Suen, Ching Y.  
Tai, James H. Y.  
Taraldsen, Knutt  
Williams, Katherine L.  
Woolford, Ellen M.  
Zaidi, Haider R.

### Research Affiliates

Altmann, David W.  
Barlow, John S.  
Brill, Michael H.  
Bullowa, Margaret

Chu, Ruey-Shi  
Crist, Alan H.  
Dowdy, Leonard C.  
Franklin, David

Grimshaw, Jane B.  
Grosjean, François  
Hamilton, William H.  
Hausler, Rudolph G.

## PERSONNEL

### Research Affiliates (continued)

Huggins, A. W. F.	Menyuk, Paula	Scharf, Bertram
Kocsis, Jeffery D.	Miller, Joanne	Schultz, Martin C.
Laferriere, Martha	Moslin, Barbara J.	Shillman, Robert J.
Makhoul, John I.	Mulroy, Michael J.	Steffens, David A.
Marr, Elizabeth M.	Painter, Colin	Stern, Richard M., Jr.
Menn, Lise	Rabinowitz, William M.	Wacks, Kenneth P.

### Instructors

Lysy, Dusan G.

### Research Assistants

Ali, Ali D.	Heiney, Paul A.	Picard, Leonard
Allen, Barry R.	Hicks, Bruce L.	Pollard, William B.
Anderson, Hope	Ho, Ping Tong	Portnoff, Michael R.
Baltin, Mark R.	Holz, Michael K. O.	Putnam, Roger S.
Brunner, Timothy A.	Hutchinson, Joseph E.	Quatieri, Thomas F.
Burzio, Luigi	Ingria, Robert J.	Ratzel, John N.
Buxton, Richard B.	Jaeggli, Osvaldo A.	Razdow, Allen M.
Cassel, Alan L.	Jarrell, Joseph A.	Richards, Burton
Castro Neto, Jarbas C.	Jones, Frederick A.	Ross, Warren S.
Caulfield, Michael F.	Jones, Joseph L.	Rotenberg, Joel
Chan, David S. K.	Jones, Roger W.	Rubenstein, Kenneth
Cheng, Rowley L.	Kash, Kathleen	Ruiz, Antonio
Dames, Lisa	Kenyon, Peter T.	Safinya, Cyrus R.
Davis, James L.	Khan, Muhammad A.	Safir, Kenneth J.
Delgutte, Bertrand	Kirsch, Steven T.	Sanders, Glen A.
Dolan, Peter V.	Klinkowstein, Robert E.	Schneps, Matthew H.
Duncan, David B.	Kulp, John L., Jr.	Serri, John A.
Filreis, James	Kurkjian, Andrew L.	Shanfield, Stanley R.
Fisher, Alan S.	Lapatovich, Walter P.	Shao, Michael
Fisher, Jay L.	LeDoux, David C.	Shefer, Ruth E.
Fulton, Scott P.	Ledsham, William H.	Shin, Robert H.
Garcia-Barreto, J. Anthony	Leibovic, Stephen	Short, William R.
Gee, Caroline	Lekach, Ann F.	Siegel, Ronald A.
George, Leland M.	Lieber, Rochelle	Smith, Neil
Glasser, Lance A.	Lim, Jae S.	Spencer, William P.
Goldhor, Richard S.	Linebarger, Marcia	Stancil, Daniel D.
Goldstein, Stephan C.	Mauel, Michael E.	Stone, David S.
Goldwasser, Samuel M.	McKinstry, Mark L.	Stowell, Timothy A.
Green, Robert W.	Mele, Eugene J.	Tebyani, Mahmoud
Greenfield, Perry E.	Moskowitz, Philip E.	Tekula, Miloslav S.
Hackel, Richard P.	Moss, Peter J.	Theilhaber, Kim
Hansman, Richard J., Jr.	Nawab, Syed H.	Toldalagi, Paul
Harris, David B.	Orenstein, Joseph W.	Vaidyanathan, A. Ganesh
Haschick, Aubrey D.	Ostler, Nicholas D.	VanBockstaele, Nathalie
Hastings, Daniel E.	Paik, Woo Hyun	Wright, Peter V.
Hawryluk, Andrew M.	Palevsky, Alan	Yanover, Peter
Haynes, William E.		Zimmerman, Myron L.

## PERSONNEL

### Teaching Assistants

Aspinall, John G.	Hayes, Monson H.	Sianez-Gutierrez, Jorge
Buckley, Robert R.	Holton, Thomas	Simmons, Diane C.
Chew, Weng C.	Hu, James V.	Simmons, Earl L.
Clements, Mark A.	Kappes, Manfred M.	Sugiyama, Linda E.
Cox, Charles H.	Keshner, Marvin S.	Tom, Victor
Davis, Mark F.	Khan, Malik M. A.	Ulicheny, Robert A.
Forbes, Alan R.	Kinney, John B.	Vatan, Pirooz
Gabriel, Kaigham J.	Misra, Subarna L.	Walkup, Robert E.
Garber, Edward M.	Odetta, Louis L.	Wang, Karl L.
Haagens, Randolph B.	Peuse, Bruce W.	Yorker, Jeffrey G.
Hakimi, Farhad	Shapiro, Daniel G.	Zicker, William L.

### Other Graduate Students

Abrams, Mark M.	Diamond, Patrick H. (10)	Hayes, Bruce P. (5)
Al-Agil, Ibrahim (1)	Dijon, Marc (11)	Hemmer, Philip R. (5)
An, Nguyen Huu	DiLeo, Anthony (4)	Hendrick, Randall (20)
Atkinson, Russell R.	Djermakoye, Boucar	Herring, James S. (21)
Baden-Kristensen, Keld (2)	Duckworth, Gregory L. (5)	Holford, Stephen K.
Baghail Anaraki, Mehran	Dyckman, Howard L.	Hoover, Gerald L. (7)
Bass, Lawrence P. (3)	Englander, Irvin S.	Howard, Iris A.
Bishop, Robert P. (4)	Ezzeddine, Amin K.	Howland, Bradford (4)
Bordley, Thomas E. (5)	Ferreira, Antonio (12)	Janos, Alan C.
Boucher, Ronald E. (5)	Fisher, Arthur D.	Johnston, Mark D.
Boutros-Ghali, Teymour	Frezza, William A. (4)	Kaplan, Martin C. (5)
Breckenridge, Janet M. (5)	Garel, Keith C., Jr. (13)	Karakawa, Masayuki
Bridges, Charles R., Jr. (4)	Garner, Geoffrey M. (5)	Kash, Michael M. (5)
Bunza, Geoffrey J. (6)	Gersh, John R. (14)	Kegl, Judy Ann (22)
Burzinski, Nancy J. (7)	Giansiracusa, Robert S. (5)	Knowlton, Stephen F. (10)
Bush, Marcia A. (4)	Gifford, Margaret L. (4)	Kopec, Gary E. (14)
Carley, Larry R. (4)	Goldberg, Jack	Kuklinski, Theodore T. (15)
Carlson, Lauri	Goldstein, Ursula G. (4)	LaMaster, Peter V. (7)
Chao, Yao-Ming (2)	Golub, Howard L. (4)	Lang, Jeffrey H.
Chiu, King-Wo	Graham, Michael R. (15)	Lang, Stephen W. (14)
Coderch, Marcel F. (9)	Green, James F.	Lattes, Ana Luisa
Coln, Michael C. (5)	Green, Robert E. (16)	Laughlin, Robert B. (6)
Cooley, John J.	Grimes, Donald L. (4)	Lawrence, Charles R.
Cooper, David E.	Hackett, Kirk E. (17)	Levinstone, Donald S. (4)
Curlander, Paul J. (5)	Hagelstein, Peter L. (14)	Levitt, David A. (7)
Davis, Robert W.	Haller, Rudolf F. (18)	Linden, Lynette L. (4)
DeGennaro, Steven V. (4)	Hammond, E. Maxine (19)	Lo, Chi Cheung

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|--|----------------------------------|
| (1) Saudi Arabian Government Fellow      | (12) Brazilian Government Fellow |
| (2) Copenhagen University Senior Stipend | (13) Jamaica Scholarship         |
| (3) Lincoln Laboratory Fellow            | (14) Hertz Foundation Fellow     |
| (4) NIH Trainee                          | (15) RLE Industrial Fellow       |
| (5) NSF Fellow                           | (16) Western Electric Fellow     |
| (6) IBM Fellow                           | (17) U.S. Air Force              |
| (7) Bell Laboratories Fellow             | (18) Rotary Foundation Fellow    |
| (8) Republic of China Government Fellow  | (19) Xerox Corporation Fellow    |
| (9) ITP Foundation Fellowship (Spain)    | (20) UCLA Support                |
| (10) M.I.T. Karl T. Compton Fellow       | (21) Babcock & Wilcox Co. Fellow |
| (11) Grass Instrument Company Fellow     | (22) Collamore-Regsy Award       |

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Other Graduate Students (continued)

Lowe, Calvin W.	Nedzel, Alexander E.	Scott, Steven D. (7)
Lynch, Thomas J., III (1)	Noterdaeme, Jean-Marie (8)	Sinha, Ravi P.
Lynn, Charles W.	Novich, Neil S. (7)	Sjoblom, Todd (7)
Machado-Mata, Jesus A. (2)	Ordubadi, Afarin	Smith, David A.
Malik, Naveed A. (3)	Otsu, Yukio (9)	Smith, Robert L. (7)
Marable, William P. (4)	Otten, Gillis R.	Spitzer, Peter G.
Marshall, Terence H. (5)	People, Roosevelt (10)	Stiefel, Michael D.
Martinez, David R.	Perley, Christopher R.	Teich, Jonathan M. (11)
Marzetta, Thomas L. (6)	Pesetsky, David (7)	Thiersch, Craig L. (12)
McCarthy, John J., III (7)	Peterson, Patrick M. (7)	Thomas, Clarence E. (13)
McManamy, Thomas J.	Picheny, Michael A. (1)	Uppal, Jack S.
Merab, André A.	Potok, Robert E.	Violette, J. P.
Miranker, Glen S.	Rice, John E.	Wang, Bingseng (14)
Misaki, Yo	Rosen, Stuart M. (7)	Wiegner, Allen W.
Mook, Douglas R. (1)	Sclove, Richard E.	Yip, Moira J.
Myung, Nam-Soo		Zuniga, Michael A. (15)

Undergraduate Students

Bar-Yam, Yaneer	Ely, Douglas J.	Kunin, Richard D.
Boisvert, Joseph C.	Epstein, Gerald L.	Kuperstein, Michael
Bondurant, Roy	Fahey, Randall E.	Lamel, Lori F.
Boyce, Suzanne E.	Finlay, William M.	Lau, Edmund C.
Bramson, Gabriel	Fisher, Joan F.	Lavelle, Gary J.
Breen, Barry N.	Forrest, John W.	Lee, Joseph Sing
Brooks, Elizabeth B.	Fratamico, John J.	Lewis, Wayne L.
Brzustowicz, Michael A.	Gawne, Timothy J.	Liebermann, Jerrold D.
Bugnacki, Philip	Gels, Robert G.	Linder, Barry J.
Campbell, James G.	Goldstein, Richard D.	Linder, Stephen P.
Celentano, Andrew	Halmos, Maurice J.	Lindsay, Herbert M.
Chapman, Joseph W.	Harrison, James	Lipkin, Michael D.
Chin, Richard W.	Hawley, James T.	Mathis, Larry J.
Chua, Eugene	Heinrichs, Richard M.	Mathis, Lisa G.
Cogswell, Kurt D.	Hind, James C.	Matson, Mark D.
Coppersmith, Susan N.	Hoffman, Ron M.	Mayhew, Gregory L.
Coyle, Christopher W.	Holtzman, Samuel	McGrath, William R.
Daniels, Diana L.	Hudson, T. David	Millar, David R.
Dillon, Robert F.	Hui, Alex Chi-ming	Mittleman, Richard K.
Doherty, Mary Jo	Kamentsky, Lee D.	Moy, Danny
Dowla, Farid U. D.	Kare, Jordin T.	Nagode, Louis A.
Dudley, Gary J.	Klipper, Esther P.	Oparah, George
Dunlay, James J.	Knowles, Daniel C.	Osofsky, Michael S.
DuPree, Michelle D.	Kosta, Daniel H.	Pan, Kelly M.
Egido, Carmen	Krieg, Kenneth R.	Pong, Willie

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|---|---|
| (1) NIH Trainee                             | (9) Japanese Society for Promotion of Science |
| (2) Grass Instrument Company Fellow         | (10) Bell Laboratories Fellow                 |
| (3) Quaid-E-Azem Scholarship                | (11) Hertz Foundation Fellow                  |
| (4) National Consortium Fellow              | (12) Danforth Foundation Fellow               |
| (5) RLE Industrial Fellow                   | (13) General Electric Co. Fellow              |
| (6) Vinton Hayes Fellowship                 | (14) Research Foundation Sao Paulo            |
| (7) NSF Fellow                              | (15) IBM Fellow                               |
| (8) Belgian American Educational Foundation |   |

## PERSONNEL

### Undergraduate Students (continued)

Qureshi, Umar  
Reistroffer, Kirk  
Reynolds, Robert A.  
Richard, Stephen M.  
Richardson, John W.  
Rotman, Stanley R.  
Roxlo, Charles B.  
Rubin, Steven I.  
Ruby, Douglas S.  
Sachere, Andrew B.  
Schiller, Jeffrey I.  
Schloss, Robert P.  
Schwartz, Andrew M.

Serabyn, Eugene  
Sheck, Maury A.  
Smith, Arnold J.  
Smith, Ted Allen  
Spohrer, James C.  
Stetser, Christopher H.  
Stolow, Marjorie L.  
Stornetta, W. Scott  
Strong, Allen L.  
Tobias, Scott D.  
Trammel, Kevin G.  
Valicenti, Richard  
Waibel, Alexander

Wainger, Mark D.  
Walling, Juaquin L.  
Wan, Hansel H-M.  
Weiner, Beth  
Weinrib, Abel  
Wexler, Ronald M.  
Willett, Robert L.  
Williams, Douglas D.  
Wolinsky, Murray A.  
Woodbury, Peter R.  
Yap, Daniel  
Yundt, George B.  
Zimmerberg, Morris

### Administrative Staff

Amdur, Alice S.  
Bella, Charles J.

Duffy, Donald F.  
Hewitt, John H.

Keyes, Richard V., Jr.  
McCarthy, Barbara L.

### Support Personnel

Aalerud, Robert W.  
Alpert, Melvin  
Barkei,Carolynne J.  
Barron, Gladys  
Barrows, Francis W.  
Bella, Rose Carol  
Bunick, Frank J.  
Cabral, Manuel, Jr.  
Carter, James M.  
Chase, Arbella P.  
Clarke, Emerson L.  
Clements, Donald A.  
Cook, John F.  
Davco, Robert J.  
Doucette, Wilfred F.  
Eccles, Miriam R.  
Edelman, Monica E.  
Edelstein, Sherry  
Ferolito, Virginia P.  
Foster, Stella J.  
Fownes, Marilyn R.  
Garabieta, Ignacio

Grande, Esther D.  
Guberman, Joseph  
Hall, Kyra M.  
Hartwieg, Erika A.  
Holcomb, A. Linnea  
Hughes, Martin O.  
Hussey, Barbara J.  
Kaloyanides, Venetia  
Kodish, Hedy S.  
Kopf, Cynthia Y.  
Latzko, Victoria  
Lauricella, Deborah A.  
Lauricella, Virginia R.  
Leach, George H., Jr.  
Lewis, Ionia D.  
Lorden, Gerald J.  
Lorusso, Catherine  
Lyall, Neena  
Lydon, Catharine A.  
Mastovsky, Ivan  
McDowell, Patricia L.

Mitchell, Joseph E.  
Morrison, William A.  
Muollo, Ralph E.  
Muse, William J.  
Nelson, Sylvia A.  
Nickerson, John C.  
North, Donald K.  
Pastore, Anthony J.  
Peck, John S.  
Peters, Nancy M.  
Poynor, Charles A.  
Rettman, Kenneth F.  
Rice, Diana D.  
Scalleri, Mary S.  
Sharib, George  
Sianez, Yolanda G.  
Sincuk, Joseph, Jr.  
Smith, Clare F.  
Taylor, Martha L.  
Taylor, Vicky-Lynn  
Thompson, Joy C.  
Wilker, Bonnie A.